

***AIR FORCE HANDBOOK 36-2218
VOLUME 1
1 NOVEMBER 1996***

Personnel

SELF AID AND BUDDY CARE



INSTRUCTOR HANDBOOK



SELF AID AND BUDDY CARE -- INSTRUCTOR HANDBOOK

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GENERAL SECTION

Instructor Guidance

CONDUCTING THE COURSE

Motivation is the key to the success of any endeavor. As an instructor, you must create an atmosphere in which the students will want to learn. One of the best ways to do this is to create a positive attitude by ensuring, to the best of your ability, that their efforts will meet with success, not failure.

If you are a novice instructor, you may want to conduct your first class with another, more experienced instructor. This is called Team Teaching.

As an instructor, you must have a good working knowledge of the material which you are to present. Before each class, you must be certain that your equipment is operational and that you have the correct amount of supplies for your class.

It is highly recommended that each instructor participate in the instructor's course which is a part of the wartime training package.

At the end of each course, have your students critique the course using the critique provided. Prepare a summary of those results and forward the summary to the Director of Base Medical Services (DSN).

Measurement is an important aspect of any educational environment. It indicates how well the instructor is presenting the material to the students and how well the students are grasping that material.

Two types of measurement will be utilized for this course; one is the written test and the other is the performance test.

For the performance test, the student must be able to perform the skill at the level or above the level indicated on the tasks, knowledge and proficiency level indicators which accompany this course. This is a "GO--NO GO" type of measurement meaning that the student must either meet or exceed the tasks, knowledge and proficiency level indicators. Conditions for each objective are predetermined by the emergency situation requiring this knowledge/skill. If the student cannot perform at the indicated level, then he/she must have remedial training either then, or a mutually agreeable time for both the student and instructor. For information on basic teaching principles, refer to AF Manual 36-2236, Guidebook for Air Force Instructors.

SELF-AID BUDDY CARE (SABC) PROGRAM**ADMINISTRATIVE OVERVIEW**

A. Purpose: To provide basic life and limb-saving training, enabling wounded or injured persons to survive until medical personnel are available to continue care. SABC training prevents needless deaths and crippling injuries in combat. Refer to AFI 36-2238, *Self-Aid and Buddy Care*, for more details.

Objective: Given various scenarios and using available materials and fellow students, accomplish SABC techniques as demonstrated by the instructor.

B. SABC Training Requirements. Nonmedical personnel in the following categories will receive training:

1. Personnel selected for overseas assignments except personnel in student status.
2. Personnel assigned to mobility positions.
3. Personnel currently serving overseas.
4. Other personnel who the unit commander determines needs SABC training.

C. Types of training:

1. SABC instructor training
 - (a) Purpose is to ensure new instructors are knowledgeable with both initial and refresher training programs. Special emphasis on the teaching techniques for leading the demonstration/performance portions.
 - (b) Medical personnel conduct SABC instructor training. Medical personnel do not perform unit-level training.
 - (c) SABC instructor certification is maintained by the instructor teaching at least 2 SABC courses a year.
2. SABC initial training
 - (a) Conducted by unit level instructors certified by Director of Base Medical Services (DBMS)
 - (b) Expiration - training required biennially (24 months)
 - (c) Training package available through base SABC advisor at the medical treatment facility
 - (d) Heavy emphasis on demonstration/performance skills
 - (e) Use improvised props - medical items may not be available in the field
 - (f) Duration - 4 hours

D. Refresher Training

1. Required biennially
2. Training program are excerpts from initial package - video tape available
3. Heavy emphasis on demonstration/performance skills and improvised props
4. Duration - 2 hours

E. Responsibilities:

1. Base level
 - (a) Unit commanders must ensure personnel are trained and remain current
 - (b) Appoint a unit SABC monitor to manage the SABC program
 - (c) Conduct initial and refresher SABC training
 - (d) Identify personnel to attend the instructor course
 - (e) Ensure a sufficient number of SABC instructors are identified to meet training needs

2. Unit SABC monitor
 - (a) Schedule personnel for training
 - (b) Document completed SABC training
 - (c) Provide SABC advisor at the medical unit a copy of letter of appointment for the unit SABC monitor
 - (d) Ensure personnel remain current in SABC requirements
 - (e) Ensure that each SABC instructor in unit teaches 2 classes a year

3. SABC medical advisor at medical facility:
 - (a) Schedules and conducts SABC instructor courses quarterly or as needed
 - (b) Provides professional and technical assistance to unit SABC programs as required
 - (c) Observes SABC courses within units at unit commander's request

4. SABC training waivers:
 - (a) All Air Force personnel who possess a medical Air Force specialty code are permanently exempt from SABC
 - (b) Personnel with current American Red Cross first aid certification
 - (c) Current emergency medical technicians (state or national registry certification)
 - (d) Personnel who have completed military survival training are exempt for 24 months
 - (e) Pararescue specialist/technicians are also exempt from SABC training

5. Improvised training props for SABC:

<u>ITEM</u>	<u>USED FOR</u>
1. Old shirts (that can be torn up)	dressings/bandages
2. Belts	tourniquets, splints
3. Ties	tourniquets, bandages
4. Towels, sheets	dressings/bandages

5.	Socks, panty hose, flight cap	dressings/bandages
6.	Sticks or tree limbs	splints
7.	Blankets	splints, litters
8.	Field jackets	litters
9.	Fatigue shirts	litters/splints
10.	Ponchos	litters/bandages
11.	Sandbags	splints
12.	Broom handles	splint poles
13.	Sacks (potato sacks)	litters

ASPECTS OF LEARNING

A. Aspects of Learning

1. To be responsive to learning, students must:
 - (a) Feel a sense of accomplishment and satisfaction
 - (b) Feel they are making progress
 - (c) See the relevancy of what they are learning
2. Material should be arranged and presented in small progressive segments so students can absorb and build upon it
3. Individuals learn by:
 - (a) Hearing
 - (b) Seeing
 - (c) Doing
4. Learning is an active process, students must be actively involved

B. Student Hindrances

1. Instructors must be aware of factors which hinder or block the student's ability to learn
 - (a) Preconceived ideas of the instructor and/or subject material
 - (b) Distractions
 - (c) Mental blocks
 - (d) Shyness
 - (e) Fear
 - (f) Fatigue
 - (g) Illness
 - (h) Uncomfortable surroundings

C. Instructor Hindrances

1. Certain instructor factors may hinder learning
 - (a) Having distracting mannerisms both in speech and actions
 - (b) Talking too fast or too slow
 - (c) Having learning experiences teacher-oriented rather than student-oriented
 - (d) Displaying impatience with slow learners

- (e) Being too reserved - not showing enthusiasm
- (f) Being poorly organized/prepared

D. Skill Training

1. Teaching any subject matter which involves a skill isn't enough for the instructor to just know the material
2. Instructors must be able to correctly teach skills to others

Procedure for Teaching New Skills

1. Identify purpose of the new skill
2. Demonstrate entire skill first, then demonstrate parts
3. Have class practice with direction, then without
4. When possible, present scenarios involving the new skill

Techniques for Demonstrations

1. Instructor must be able to demonstrate skill perfectly
2. Participants must be arranged so that all can see and hear demonstration
3. Instructor must remember that people learn at varying rates, great patience must be shown for slow learners
4. Use praise and/or constructive criticism freely

E. Classroom Environment

1. The ideal classroom should:
 - (a) Be well-lighted, well-ventilated and temperature controlled
 - (b) Be arranged so all can see and hear
 - (c) Be free from distractions
 - (d) Have ample space for demonstrations
 - (e) Have provisions for audiovisuals
 - (f) Consider safety precautions such as fire extinguishers and escape routes

F. Use of Audio-Visual Materials

1. Audio-visual material is a helpful adjunct to most presentations if correctly used
2. Audio-visual material must be pertinent to the topic and easily understood

Blackboard/Whiteboard

1. Draw or write large
2. While writing, don't talk to the board - finish writing first
3. Don't clutter the board with a lot of diagrams/words

Films/Slides/Transparencies

1. Ensure equipment works
2. Know how to operate equipment
3. Preview material in advance
4. Brief group on any key points to watch for
 - (a) Prior to showing film
 - (b) While slide or transparency is on screen
5. Ensure all can see
6. Discuss material at end of films/slides/transparencies

QUALITIES OF AN EFFECTIVE INSTRUCTOR**A. Introduction**

1. The instructor sets the tone of the class
2. The instructor can present material in such a way that students do not learn and instructors do not care
3. The instructor may present material in a manner where students are eager to learn and effective utilization of class time and materials are made

B. Qualities

1. Neatness
 - (a) Appearance is the first thing an individual notices about another
 - (b) Do not wear clothing that distracts from your presentation
2. Language - do not use foul or offensive language
3. Speaking voice
 - (a) Loud enough to be heard by everyone
 - (b) Distinct
 - (c) Slow enough for comprehension
4. Eye contact
 - (a) Maintain eye contact
 - (b) Difficult for many
 - (c) Indicates that the instructor is talking to students and has an interest in them
 - (d) Enables instructor to observe each student for boredom, or lost expressions
5. Bluffing
 - (a) Don't bluff an answer, you'll get caught
 - (b) If asked a question that you cannot answer, admit it
 - (c) Find the answer and encourage the student to do the same, get back with each other
 - (d) Never let a question go unanswered
6. Respect questions
 - (a) Do not make students feel "dumb" for having asked a question
 - (b) Encourage students to answer their own questions by leading them in thought

- (c) One method of determining the extent to which the participants comprehended the material is to establish a discussion period
- (d) Leading effective discussions often requires experience
- (e) Suggested methods:
 - 1. Utilize questions to begin discussions
 - 2. Ask questions of the entire class, not just a few
 - 3. If the group doesn't respond, ask for an individual's reaction, experience and/or interpretation
 - 4. Seek explanations of viewpoints
 - 5. Involve all class members in discussion - don't allow one or two members to monopolize
 - 6. Keep discussions on the subject
 - 7. Make periodic, brief summaries to help crystallize thoughts expressed
 - 8. Recognize contributions of class members
 - 9. Allow class members to talk and express their opinions
- 7. Sarcasm/argumentative
 - (a) Sarcasm indicates a lack of respect and caring about subject material and students
 - (b) Sarcasm does not foster effective student/instructor relationships
 - (c) Sarcasm leads to arguments
 - (d) If the student argues about a certain point, refer to references, do not argue during class time
- 8. Involvement
 - (a) Involve the entire class
 - (b) Do not allow certain students to dominate the class
 - (c) Encourage all members to participate in discussions
 - (d) Remember learning is an active process
- 9. Fair treatment
 - (a) Treat all class members fairly
 - (b) Do not have class favorites
- 10. Punctuality
 - (a) Instructor expects students to be on time and students should be afforded the same courtesy

- (b) Class should start and end on time
- 11. Learn names - shows that you take a personal interest in your students
- 12. Patience
 - (a) Not everyone learns at the same rate
 - (b) Showing impatience with a student causes frustrations, feelings of failure and hinders learning
- 13. Know the material - no matter how often you teach a course, review lesson plans and update your material.
- 14. Enthusiasm
 - (a) You'll have students who would rather be somewhere else
 - (b) Start off on a positive note indicating relevancy of material
 - (c) Enthusiasm is contagious
- 15. Professionalism - be professional to maintain control
- 16. Safety
 - (a) Keep in mind safety of students
 - (b) Know locations of the fire extinguishers and exits
 - (c) Don't allow students to perform potentially hazardous activities
- 17. Flexibility
 - (a) Be flexible
 - (b) Be prepared for murphy's law
- 18. Personality
 - (a) Adapt your personality to the class
 - (b) Realize your own short comings and concentrate on working around them
- 19. Sense of humor - when things go wrong, look on the bright side to avoid becoming nervous and frustrated
- 20. Experience is your best teacher

SECTION A

1. ANATOMY AND PHYSIOLOGY

OVERVIEW AND GUIDANCE

A. Objectives: By the end of this lesson, the participant will be able to:

- (1) Define anatomy and physiology
- (2) Identify basic facts and principles about the human body

B. Support Material and Guidance

- (1) Student Instructional Materials: Student note taking device
- (2) Audiovisual Aids: TV/VCR with SABC Video
- (3) Training Equipment: None
- (4) Multiple Instructor Requirement: None
- (5) Instructional Guidance: Lecture - Discussion - 20 min

Anatomy and Physiology

- (a) Definition of anatomy and physiology
- (b) Directional terminology relating to anatomy and physiology
- (c) Body Systems

1. ANATOMY AND PHYSIOLOGY

A. Introduction

- (1) Anatomy is the study of body structure, while physiology is the study of body function
- (2) Knowledge of the body is necessary to determine the nature of a patient's illness or injury and to provide appropriate care

B. The Language of Anatomy and Physiology

- (1) Directional Terms
 - (a) Anatomical Position - The human body, standing erect, facing you with the arms down at the sides and palms facing forward. Unless otherwise indicated, all references to body structures are made when the body is in the anatomical position.
 - (b) Anterior and posterior - anterior means the front of the body, and posterior is used to indicate the back of the body
 - (c) Midline - an imaginary vertical line that divides body into right and left halves
 - 1 Medial - lying towards the midline
 - 2 Lateral - lying away from the midline
 - (d) Superior and inferior - terms used to compare structures and locations
 - 1 Superior means toward the head
 - 2 Inferior means toward the feet
 - (e) Proximal and distal - terms used primarily for the extremities, with the shoulder and hip as the points of reference
 - 1 When describing a limb, the closer the injury is to the trunk of the body, the more proximal the injury is
 - 2 When the injury is farther away from the trunk of the body, the more distal it is

C. Introduction to Anatomy

- (1) Anatomy is the study of body structure

- (2) Body regions
 - (a) Head
 - (b) Neck
 - (c) Trunk
 - (d) Upper extremities
 - (e) Lower extremities
- (3) The spine
 - (a) Cervical
 - (b) Thoracic
 - (c) Lumbar
 - (d) Sacrum
 - (e) Coccyx

D. Body Systems

- (1) A group of organs that carry out specific body functions
- (2) Knowing the different body functions can be useful when trying to determine the extent of injury
- (3) The following is a list of the major body systems:
 - (a) Nervous System
 - 1 The nervous system consists of the brain, spinal cord and nerves that control and permit all body activities and sensations (such as eating, walking and all conscious movement)
 - 2 Controls unconscious muscle movement and certain other bodily functions (heart beat, blood pressure)
 - 3 Controls responses to stressful and relaxed environments (fight or flight, and digestion etc.)
 - 4 A muscle will not move if the nerves that serve it are cut
 - 5 Structures of the Nervous System
 - a Brain - composed of many structures which is essential for

human function and is surrounded by the skull

- b Brain stem - connects the brain to the spinal cord and controls breathing, heart rate, swallowing, coughing, and vomiting

(b) Circulatory (Cardiovascular) System

1 Consists of the heart, vessels, and blood

2 Oxygen is transported to all body systems through arteries

3 Removes waste products and carbon dioxide from the body

4 Regulates body temperature

5 The circulatory system is composed of the heart which pumps approximately 5 liters of blood throughout the body

- a The heart is a muscle that pumps blood through the blood vessels to body tissues and cells

- b Located midlower sternum, toward the left side of the chest

6 The heart rate can be measured by feeling certain arteries (pulse points):

- a Brachial

- b Radial

- c Ulnar

- d Femoral

- e Dorsalis pedis

- f Posterior Tibia

- g Carotid (right and left)

(c) Respiratory System

1 Consists of organs that permit breathing

2 Provides a means for oxygen intake and the elimination of carbon dioxide and other waste products

3 The major structures of the airway include:

- a Nose and mouth - air enters the body where it is warmed and moistened
- b Pharynx - the throat. The common passageway for air and food.
- c Larynx - the neck structure that connects the pharynx and the trachea
- d Trachea - the windpipe
- e Lungs - the spongy, elastic organs containing microscopic air sacs where oxygen and carbon dioxide exchange takes place

4 Physiology of respiration

- a The entire act of breathing would not be accomplished without the diaphragm (main muscle of respiration). When the diaphragm contracts, we inhale, as it relaxes, we exhale.
- b Then air enters the throat, the trachea, bronchioles and into the lungs where the exchange of oxygen and carbon dioxide takes place

(d) Skeletal System

- 1 The skeletal system is made up of all the bones and joints in the body
- 2 The skeletal system provides the body with four major functions:
 - a Bones support, creating a framework to give the body form and to provide a rigid structure for the attachment of muscles and other body parts
 - b Bones articulate, allowing body movement. Note: Muscles are attached to bones.
 - c Provides protection for the internal organs (skull protects the brain;

the spinal cord encloses and protects the spinal cord; ribs protect the heart, lungs, liver, stomach and spleen; and bones of the pelvis protects the urinary bladder and the internal reproductive organs)

d Stores certain minerals and grows blood cells

(e) Muscles (Musculoskeletal) System

1 Muscles are involved with body movement, moving food, fluids, or blood through structures in the body, and with body posture

2 Most of the emergency care of muscle injury is associated with care of soft tissue injury and possible fractures

3 Basic care procedures for serious muscle injuries include:

a Dressing open wounds

b Immobilizing the injured part

c Treating for shock

2. COMMUNICABLE DISEASES/UNIVERSAL PRECAUTIONS

OVERVIEW AND GUIDANCE

A. Objectives: By the end of this lesson, the participants will be able to:

- (1) Define communicable diseases
- (2) Define universal precautions
- (3) Recognize situations that would necessitate use of universal precautions

B. Support Material and Guidance

- (1) Student instructional material. Student note taking device
- (2) Audiovisual Aids: None
- (3) Training Equipment: Latex gloves and pocket masks
- (4) Multiple Instructor Requirements: None
- (5) Instructional Guidance: Lecture/Discussion 10 minutes

C. Communicable Disease and universal precautions

- (1) Definition of communicable disease
- (2) Definition of universal precautions
- (3) Situations that warrant use of universal precautions

2. COMMUNICABLE DISEASE/UNIVERSAL PRECAUTIONS

A. Definition

- (1) Communicable Disease - refers to illness that can be transmitted from one person to another
- (2) Four ways to transfer communicable diseases
 - (a) Contact transmission
 - (b) Airborne transmission
 - (c) Vehicle transmission - introduced directly into the body through the ingestion of contaminated food, water, fluids, or blood
 - (d) Vector transmission - infective organism is transmitted to an individual by animals (eg. mosquitoes transmit malarial parasites and ticks transmit Lyme disease)

B. Universal precautions - Protective measures developed by the Centers for Disease Control (CDC) for use when dealing with objects that might accidentally puncture the skin of a health care worker.

C. Identification of Communicable Disease Patients

- (1) Identifying a victim as having a communicable disease is difficult
- (2) Universal Precautions using body substance isolation should be instituted as a routine procedure

D. Diseases that cause concern for transmission

- (1) Hepatitis
- (2) Meningitis
- (3) Tuberculosis
- (4) HIV

E. To minimize contracting communicable diseases

- (1) Employ universal precautions where possible and feasible
- (2) Use protective barriers located in the SABC Equipment/supply kit located in mobility bag, Kit# NSN 6545-00-912-9860.
 - (a) Pocket mask - used as protection during CPR against blood and body fluids and airborne pathogens.

- (b) Latex gloves - used as protection against blood and body secretions.

3. AIRWAY MANAGEMENT**OVERVIEW AND GUIDANCE**

- A. Objectives:** By the end of this lesson, the participant should be able to demonstrate the steps in opening a victim's airway using the head tilt chin lift technique
- B. Support Material and Guidance**
- (1) Student Instructional Material: Student note taking device
 - (2) Audiovisual Aids: None
 - (3) Multiple Instructor Requirement: 1 Instructor per 10 students
 - (4) Instructional Guidance: Lecture/Discussion
- C. Airway Management**
- (1) Head tilt-chin lift technique
 - (2) Steps in opening a victim's airway

3. AIRWAY MANAGEMENT

A. Introduction

- (1) In the unresponsive victim, the rescuer will need to determine if the victim is breathing. In many instances, however, this may not be accurately ascertained unless the airway is opened.
- (2) Recommendations for Opening the Airway. The recommended technique must be simple, safe, easily learned, and effective. Since head tilt-chin lift meets this criteria, it is the method of choice.
- (3) A key action for successful resuscitation is immediate opening of the airway by positioning the head properly. It is important to remember that the back of the tongue and the epiglottis are the most common causes of airway obstruction in the unconscious victim.
- (4) Since the tongue, directly, and the epiglottis, indirectly, are attached to the lower jaw, tilting the head back and moving the lower jaw (chin) forward lifts the tongue and the epiglottis from the back of the throat and usually opens the airway.

Head Tilt-Chin Lift Maneuver

- (1) To accomplish the head tilt maneuver, one hand is placed on the victim's forehead and firm, backward pressure is applied with the palm to tilt the head back.
- (2) To complete the head tilt-chin lift maneuver, the fingers of the other hand are placed under the bony part of the lower jaw near the chin and lifted to bring the chin forward and the teeth almost to occlusion, thus supporting the jaw and helping to tilt the head back
- (3) The fingers must not press deeply into the soft tissue under the chin, which might obstruct the airway. The thumb should not be used for lifting the chin.
- (4) Demonstration/Practice
 - (a) Verbalized the cause(s) for airway obstruction
 - (b) Open airway using the head tilt-chin lift maneuver

SECTION B**1. RECOGNITION AND CONTROL OF BLEEDING****OVERVIEW AND GUIDANCE**

A. Objectives: By the end of this lesson, the participant should be able to

- (1) Recognize external arterial, venous, and capillary bleeding
- (2) Describe signs and symptoms of internal bleeding
- (3) Correctly perform methods of controlling external bleeding

B. Support Material and Guidance:

- (1) Student Instructional Materials: None
- (2) Audiovisual Aids: TV/VCR with SABC Video
- (3) Training Equipment: Bandages and Dressings
- (4) Multiple Instructor Requirement: 1 Instructor: 10 Students
- (5) Instructional Guidance: Lecture - Discussion - 40 min

C. Recognition and Control of Bleeding

- (1) Bleeding may be internal or external
- (2) Types of vessels: arteries, veins, capillaries
- (3) Types of external bleeding - signs of: arterial, venous and capillary
- (4) Internal Bleeding
 - (a) Causes
 - (b) Signs and Symptoms
 - (c) Control of Bleeding
- (5) Control of External Bleeding
- (6) Direct Pressure/Positioning
- (7) Pressure Point
- (8) Tourniquet
- (9) Have students practice on self and buddy 3 methods of control of external bleeding of:
 - (a) Upper thigh using tourniquet
 - (b) Upper arm using direct pressure and positioning
 - (c) Face using pressure point

- (d) With tourniquet, have students go through steps in application up to the tightening, do not tighten - 30 min practice time
- (10) Quiz - 10 min

1. CONTROL OF BLEEDING

A. Introduction

- (1) Severe bleeding and hemorrhage mean the same thing
- (2) Bleeding may be internal or external and if severe enough, may be fatal
- (3) Average adult has 5-6 liters (10-12 pints) of blood circulating in the body

B. Circulatory System

- (1) Blood is transported within the circulatory system through blood vessels
- (2) Three types of blood vessels:
 - (a) Arteries - carry blood away from heart
 - (b) Veins - carry blood back to the heart
 - (c) Capillaries - connect arteries and veins also where carbon dioxide and nutrients/waste exchange takes place
- (3) Circulatory system is a closed system
- (4) Any break in integrity of the system will cause bleeding
- (5) Types of external bleeding:
 - (a) Arterial bleeding
 - 1 Bright red - high oxygen content
 - 2 Spurting - with each contraction (pulse) of heart
 - 3 The most serious kind of external bleeding
 - (b) Venous Bleeding
 - 1 Steady flow and can be quite heavy
 - 2 Dark red blood (maroon) - low oxygen content
 - 3 Can be life threatening if not controlled
 - (c) Capillary
 - 1 Slow even flow (oozing)

- 2 Color is less bright than arterial blood
 - 3 Example - scraped knee, "road rash"
 - 4 Seldom a life threatening problem
- (6) Rapid external bleeding is important
- (a) Average adult can comfortably lose one pint (as in blood donation) over 15-20 minutes
 - (b) If larger amounts are withdrawn or if this amount is withdrawn faster, body may not be able to adjust and could go into shock

C. Internal Bleeding

- (1) Not usually visible, but can be serious, even fatal
- (2) Bleeding from any opening in body, however slight, may be serious as it usually indicates an internal source of bleeding
- (3) Causes
 - (a) Bleeding ulcers (vomiting or coughing up blood) *For example:* coffee ground color
 - (b) Fractures: ribs, femur and other long bones (arms and thighs)
 - (c) Blunt trauma to abdomen or elsewhere (tenderness in the stomach)
- (4) Signs and symptoms of internal bleeding
 - (a) Pulse becomes weak and rapid
 - (b) Skin becomes cold and clammy (wet), pale, profuse sweating (usually found first at the extremities)
 - (c) Eyes become dull - pupils may be dilated and slow to respond to light
 - (d) Victim is thirsty and restless or combative (do not give anything to drink)
 - (e) Victim may be nauseated and vomit (place victim on side to prevent choking)
 - (f) Shallow and rapid breathing
- (5) Control of internal bleeding depends on site of the hemorrhage

- (a) Bleeding within chest
 - 1 Beyond scope of lay-person
 - 2 Treat for shock
- (b) Abdominal bleeding
 - 1 Abdomen will be rigid and warm
 - 2 If available, apply wide bandage to fit snugly but do not interfere with breathing
 - 3 Treat for shock
- (c) Bleeding into extremities (arms or legs)
 - 1 Area will be warm and swollen
 - 2 Treat by splinting
 - 3 Treat for shock

D. External Bleeding is hemorrhage that can be seen coming from a wound

- (1) Causes
 - (a) Bullet wounds
 - (b) Stabbings
 - (c) Open fractures
 - (d) Incomplete amputations
- (2) Treatments
 - (a) Direct pressure (the best all around method of controlling bleeding)
 - 1 Preferably use sterile/clean material, but hand (heel or fingers) will do
 - 2 Do not remove dressings until medical help arrives
 - 3 If dressing becomes soaked, add more dressing and pressure (do not remove original dressing)
 - 4 If no fractures are suspected, elevate limb along with applying direct pressure

- (b) Elevation - using gravity to control bleeding
 - 1 Elevating the bleeding part of the body above the level of the heart will slow the flow of blood and speed clotting
 - 2 Use elevation with direct pressure when there are no fractures or fractures have been splinted and it will not cause no pain
- (c) Pressure points - areas over a bone where arteries are close to the skin. Pressing the artery against the underlying bone can control the flow of blood to the injury.
 - 1 Areas
 - a Knee - popliteal artery, right behind the knee
 - b Arm - inner half of arm midway between elbow and armpit
 - c Groin - compress femoral artery against pelvis with heel of hand
 - d Wrist - radial artery, where medics check for a pulse
 - e Neck - compress carotid artery on affected side for head and face areas (NEVER apply pressure to both sides of the neck at the same time)
 - 2 Use in conjunction with direct pressure
 - 3 If no fractures suspected, elevate limb along with using pressure point
- (c) Tourniquet - the last resort method
 - 1 Definition - constricting band around arm or leg to stop severe bleeding
 - 2 Rarely if ever necessary
 - 3 Used only as last resort, as it will:
 - a crush considerable amount of tissue
 - b cause permanent damage to nerves and blood vessels

c can result in loss of extremity

4 Application of tourniquet is to save lives and possibly sacrifice limb

5 Application

a Tourniquet may be made from:

1 gauze

2 Muslin bandage

3 clothing/belt/ kerchief

b Improvised tourniquet used with rigid stick-like object

c To minimize skin damage, insure improvised tourniquet is wide enough to remain at least 1" in width after tightening

d Place tourniquet around limb and between wound and heart

e Place tourniquet 2-4" above injury

f Never place directly over wound or fracture

g If possible, place over smoothed sleeve or trouser leg to prevent pinching of skin

h Tighten only enough to stop bleeding

i If pulse can be felt prior to tourniquet application, stoppage of pulse is an indicator that tourniquet pressure is sufficient

j DO NOT use wire or shoe strings for a tourniquet

k Arterial bleeding will stop, but venous bleeding will continue until vessels are drained

l Once tourniquet is in place, leave it there, do not disturb it (it should not be loosened)

m Leave tourniquet exposed

- n Mark "T" and the time tourniquet was applied on victim's forehead

- o Only use on arm(s) or leg(s) where there is a danger of loss of casualty's life

E. Practice/Test

- (1) Have students practice on self and buddy the 3 methods of controlling external bleeding using:
 - (a) upper thigh using tourniquet
 - (b) upper arm using direct pressure/positioning
 - (c) face using pressure point
- (2) With tourniquet, have students go through steps in application up to the tightening, DO NOT TIGHTEN
- (3) After practice, quiz students on above

F. Written/Oral Quiz

- (1) List signs of:
 - (a) arterial bleeding
 - (b) venous bleeding
 - (c) capillary bleeding
- (2) List 4 signs and symptoms of internal bleeding

BLEEDING

SABC TEST QUESTIONS

1. What blood vessel spurts bright red blood?
2. Bleeding from what vessel flows steadily and is dark red?
3. Bleeding from what vessel oozes and is usually not severe?
4. What is the best way to stop external bleeding?
5. Replace a dressing after it has been soaked with blood.
True or False
6. Once a tourniquet has been applied, loosen it every 15 minutes.
True or False
7. Which procedure to control bleeding, should be used as a last resort?
 - a. Tourniquet
 - b. Pressure Points
 - c. Direct Pressure

BLEEDING**SABC TEST ANSWERS**

1. Artery
2. Vein
3. Capillary
4. Direct pressure
5. False
6. False
7. Tourniquet

2. SHOCK MANAGEMENT

OVERVIEW AND GUIDANCE

A. Objectives: By the end of this lesson, the participant will be able to:

- (1) Recognize signs and symptoms of shock
- (2) Correctly provide basic treatment to shock victim

B. Support Material and Guidance

- (1) Student Instructional Materials: Student note taking device
- (2) Audiovisual Aids: TV/VCR and SABC Video
- (3) Training Equipment: None
- (4) Multiple Instructor Requirement: None
- (5) Instructional Guidance: Lecture - Discussion - 20 min

C. Shock Management

- (1) Definition of shock
- (2) Major causes
- (3) Signs and symptoms
- (4) Written/Oral quiz - 5 min

2. SHOCK MANAGEMENT

A. Definition

- (1) Collapse of cardiovascular system - the failure of blood to circulate throughout the body
- (2) May be caused by problems with blood vessels, heart, or deficiency of circulating volume
- (3) Body organs must receive sufficient supply of oxygen in order to function - if not, they fail and possibly die
- (4) Brain and heart are the most sensitive organs of the body to deprivation of oxygen

For example: fainting

B. Major Causes of shock

- (1) Failure of heart as a pump - heart attack
- (2) Decreased amount of circulating volume - hemorrhage, burns and dehydration
- (3) Severe dilation of vessels - severe wound infection and allergic reactions

C. Signs and Symptoms of shock

- (1) Restlessness, anxiety, confusion (or loss of awareness)
- (2) Pulse - weak and rapid
- (3) Skin - cold, clammy, pale (if a dark-skinned person is in shock, check the color under their nails, eyelids and inside the mouth)
- (4) Sweating - profuse
- (5) Respirations - shallow, labored, rapid and irregular (may raise the upper body (the head and shoulders) for any breathing problems)
- (6) Eyes - dull with pupils dilated (large) and slow to react
- (7) Thirst
- (8) Nausea and vomiting
- (9) Cyanosis (late sign of shock) bluish color around lips and mouth

D. Treatment of shock

- (1) Open airway and initiate CPR if necessary and if you know how

ABC's are initial treatments for any injury

- (2) Control obvious bleeding
- (3) Elevate lower extremities at least 12" unless injured
- (4) Splint fractures - this decreases pain and shock
- (5) Prevent loss of body heat
 - (a) Place blanket, poncho, or jacket over and under victim
 - (b) Do not overheat victim as this dilates vessels and further decreases circulation
- (6) Do not give anything by mouth (no food or water)
- (7) If conscious, place on side and monitor airway
- (8) *NOTE: Shock is an immediate life and death emergency situation.

Shock stuns and weakens the body. When the normal blood flow in the body is upset, death can result. Early identification and proper treatment may save the casualty's life.

E. Written/Oral Quiz

- (1) List 6 signs and symptoms of shock
- (2) List 5 forms of treatment

SHOCK**SABC TEST QUESTIONS**

1. Fainting is not a type of shock.
True or False
2. A person in shock may have a pale or bluish face.
True or False
3. If a dark skinned person is in shock, check the color under his/her nails, eyelids and inside the mouth.
True or False
4. If a person is in shock, the pupils of his/her eyes will be _____.
 - a. Normal size
 - b. Larger than normal size
 - c. Smaller than normal size
5. The first step to control shock is to _____.
 - a. Control bleeding
 - b. Keep the victim breathing
 - c. Elevate the lower body
6. When giving care for shock, elevate the _____ unless it is injured.
 - a. Lower body
 - b. Upper body
 - c. None of the above
7. If the victim has trouble breathing, elevate his/her head and shoulders.
True or False
8. The victim in shock is kept warm by placing blankets _____.
 - a. Only above the body
 - b. Only above the body
 - c. Above and below the body

SHOCK

SABC TEST ANSWERS

1. FALSE
2. TRUE
3. TRUE
4. b.
5. b.
6. a.
7. TRUE
8. c.

3. DRESSING AND BANDAGING

OVERVIEW AND GUIDANCE

A. Objectives: By the end of this lesson, the participant will be able to:

- (1) State main functions of:
 - (a) Dressings
 - (b) Bandages
- (2) Correctly apply:
 - (a) Dressings
 - (b) Bandages

B. Support Material and Guidance

- (1) Student Instructional Material: Student note taking device
- (2) Audiovisual Aids: VCR/TV with SABC Video
- (3) Training Equipment: Materials for bandaging and dressing
- (4) Multiple Instructor Requirement: 1 Instructor: 10 Students
- (5) Instructional Guidance:

C. Dressing and Bandages

- (1) Dressings and Bandages - 30 min
 - (a) Definition/purposes
 - (b) General principles of application
 - (c) Two special types of wounds
 - 1 Chest
 - 2 Abdominal
 - (d) Demonstration/Practice/ Testing dressing and bandaging of:
 - 1 Head
 - 2 Upper leg
 - 3 Chest
 - 4 Abdomen

3. DRESSING AND BANDAGING

A. Definitions

- (1) Dressings - sterile pads or compresses used to cover a wound
- (2) Bandages - used to
 - (a) Hold dressings in place
 - (b) Protect edges from dirt
 - (c) Create pressure for control of bleeding

B. All Wounds are Considered Contaminated (Dirty)

- (1) Infection producing germs are always present on skin, clothing and in air
- (2) Objects causing wound (shrapnel, bullets) carry germs
- (3) Fact that wound is contaminated does not lessen importance of protecting it from further contamination

C. Application

- (1) Cut/tear clothing away from wound
- (2) Place dressing over wound
- (3) Secure dressing with bandage
- (4) Apply bandage tight enough to keep dressing from slipping, but not so tight as to interfere with circulation

Mandatory Instructor Note: For arms, legs, and toes be sure **not** to cover, so that their color can be seen. If you notice color changes from normal to blue or tingling of extremities, then the bandage is too tight - loosen.

- (5) Bandage injured extremities in the position that you want them to stay and in the position which they normally move. For example the elbow and knee may be bent at a right angle (90 degrees) before applying the bandage. CAUTION: don't bend the extremity if bending will make injury worse.

D. Two Special Types of Wounds

- (1) Chest wound

- (a) Place hand or something airtight (ID card, cellophane from cigarettes) over wound
 - (b) Apply bandage
 - (c) Allow patient to assume position easiest for breathing
 - (d) Observe for shock
- (2) Abdominal wound
- (a) If abdominal contents lie outside abdominal cavity, do not replace them
 - (b) Cover contents with sterile/ clean dressing - moist if possible
 - (c) Secure with bandage
 - (d) Place victim in sitting position with legs drawn up
 - (e) Observe for shock

Mandatory Instructor Note: If an eye is injured, apply bandage to both eyes. Because both eyes always move together. If both are bandaged, then they are less likely to move at all.

E. Demonstration/Practice/Testing

- (1) Dressing and bandaging of:
 - (a) Head injury
 - (b) Upper leg
 - (c) Chest
 - (d) Abdomen
 - (e) Quiz (dressing & bandaging)

DRESSING AND BANDAGES

SABC TEST QUESTIONS

1. A covering that protects a wound is a _____.
2. A strip of cloth used to hold a splint in place is a _____.
3. If one eye of the victim is injured, cover both eyes.
True or False
4. When bandaging arms and legs, let the fingers and toes be exposed.
True or False
5. Never bend the elbow or knee to a right angle before applying a bandage.
True or False

DRESSINGS AND BANDAGES**SABC TEST ANSWERS**

1. Dressing
2. Bandage
3. True
4. True
5. False

4. FRACTURES AND SPLINTING

OVERVIEW AND GUIDANCE

A. Objectives: By the end of this lesson, the participant should be able to:

- (1) Recognize fractures
- (2) Identify functions of splints
- (3) Apply splints

B. Support Material and Guidance

- (1) Student Instructional Material: Note taking device
- (2) VCR/TV with SABC Video
- (3) Training Equipment: Materials for Splinting
- (4) Multiple Instructor Requirement: 1 Instructor: 10 Students
- (5) Instructional Guidance: Splinting - 50 min

C. Fractures and Splinting (Outline)

- (1) Purposes
- (2) Signs and symptoms of fracture
- (3) Principles of splinting
- (4) Improvisation of splinting
- (5) Demonstration/Practice/Testing
 - (a) Splinting of: upper and lower arm and upper leg
 - (b) Application of sling
- (6) Neck/Spinal
 - (a) Spinal column
 - (b) Neck
- (7) Demonstration/Practice/Testing
 - (a) Immobilize: back and neck
 - (b) Place victim on litter (this is done during transportation)
 - (c) Oral/written quiz - 5 min

4. FRACTURES AND SPLINTING

A. Purposes

- (1) Prevent movement of fractured bone
- (2) Reduce pain of fractured area
- (3) Prevent further damage of muscles, nerves and vessels

B. Signs and Symptoms of Fracture

- (1) Deformity
 - (a) Part will lie in unnatural position
 - (b) Part may be angulated (bent) where there is no joint
- (2) Tenderness: Sharp, localized pain at site of break (especially upon movement)
- (3) Grating
 - (a) Sensation felt when ends of broken bones are rubbed together
 - (b) Do not intentionally rub bone together (never push back bone ends)
 - (c) Could cause damage to nerves, vessels, and muscles
- (4) Swelling and discoloration
 - (a) Due either as result of hemorrhage or edema (increased fluid in tissues)
 - (b) Bleeding occurs when major blood vessels in bone, soft tissue and muscle near fracture rupture. This causes swelling, discoloration and heat.
- (5) In open fracture, bone is exposed which increases potential for infection
- (6) Closed fracture, broken bone that does not have a break in underlying skin. Tissue beneath skin may be damaged.

C. Principles of Splinting

- (1) Splints support the broken bones. They keep them from moving.
- (2) Remove clothing from fractured area

- (3) Check pulse distal to site of injury
- (4) Splint above and below joint involved
- (5) "Splint them where they lie"
 - (a) Do not try to straighten part
 - (b) Do not move victim (unless in further danger) until part is immobilized
- (5) Use padding between injured part and splint
- (6) Secure splint with bandages at several points above and below fracture
- (7) Use a sling and swath to support splinted arm if arm is bent

For example: Do you move your buddy who has a broken leg and then splint the broken bone?

Answer: No! Apply splint first, then move your buddy.

D. Improvisations

- (1) Splints improvised from:
 - (a) Boards
 - (b) Poles
 - (c) Sticks
 - (d) Cardboard
 - (e) Tree limbs
 - (f) Rifles (unloaded), ammo canister lids
 - (g) Rolled newspapers, magazines, pillows, blankets, bags, jackets
- (2) To immobilize fractured arm you can use the chest wall
- (3) To immobilize fractured leg you can use the other leg
- (4) Padding
 - (a) Jackets
 - (b) Blankets
 - (c) Ponchos

- (d) Leafy vegetation
- (5) Bandages
 - (a) Belts
 - (b) Rifle slings
 - (c) Handkerchiefs
 - (d) Strips torn from clothing or blankets
- (6) Slings - a bandage suspended from the neck to support an upper extremity
 - (a) Tail of coat/shirt
 - (b) Belts
 - (c) Pieces torn from clothing or blankets
- (7) Swathes: Swathes are any bands (pieces of cloth, pistol belts, and so forth) that are used to further immobilize a splinted fracture. Triangular and cravat bandages are often used as or referred to as a swathe bandage. The purpose of the swathe is to immobilize, therefore, the swathe bandage is placed over and/or below the fracture - not over it.

E. Spinal/Neck Injuries

- (1) Spinal column
 - (a) Be suspicious of back injury if individual has fallen on back
 - (b) If individual has such an injury and he lacks feeling in legs or lacks ability to move them, treat him for a back injury
 - (c) If there is a fracture, bending spinal column can cause sharp bone fragments to bruise or cut cord and results in permanent paralysis
 - (d) Steps to follow if victim is not to be moved until medical personnel arrive
 - 1 If conscious, caution him not to move
 - 2 Check his/her airway
 - 3 Leave him/her in position in which found

- 4 If neck is in abnormal position, immobilize in that position
- 5 If face-up
 - a Keep head still
 - b Raise shoulders enough to slip roll of cloth (bulk of bath towel) under neck
 - c Roll thick enough to arch neck, but leave back of head on ground
 - d Immobilize head use padding with heavy objects as boots, rocks or bricks placed on each side of head if using boots, fill with stones, rocks, sand and tie at top
- (d) If prepared for transportation before medical personnel arrive:
 - 1 Need two people
 - 2 Place wide board/litter lengthwise beside victim (should extend 4" beyond head and feet)
 - 3 If victim lying face-up, #1 man steadies head and neck while #2 man, with one foot and knee placed against board to prevent it from slipping, grasps victim at shoulders and hip and gently slides him on board
 - 4 If victim face-down
 - a #1 stabilize head and neck with hands
 - b #2 gently roll victim onto board
 - c #1 continue to steady neck
 - d #2 immobilize neck
 - 5 Once on litter, secure wrists and cover with blanket

F. Demonstration/Practice/Testing

- (1) Immobilize:
 - (a) Back
 - (b) Neck

- (c) Upper and lower arm
- (d) Upper leg

FRACTURES AND SPLINTS**SABC TEST QUESTIONS**

1. An open fracture is always contaminated with germs.
True or False

2. One reason for splinting is to prevent damage to nerves, muscles, and blood vessels.
True or False

3. Unless there is a greater immediate threat to life, splint the broken body part before moving the victim.
True or False

4. To test for a fracture of the leg, have the victim move or walk on the leg.
True or False

5. Before splinting, push back any bone ends that you can see.
True or False

FRACTURES AND SPLINTS

SABC TEST ANSWERS

1. True
2. True
3. True
4. False
5. False

SECTION C**1. THE CHEMICAL ENVIRONMENT: NERVE AGENTS AND NERVE AGENT ANTIDOTES****OVERVIEW AND GUIDANCE**

A. Objectives: By the end of this lesson, the participant should be able to:

- (1) State the contents of the nerve agent kit
- (2) State the use of the nerve agent kit
- (3) State the signs and symptoms of nerve agent poisoning

B. Support Material and Guidance

- (1) Student Instructional Materials: Student note taking device
- (2) Audiovisual Aids: TV/VCR with SABC video
- (3) Training Equipment: Nerve Agent Demonstration Kit
- (4) Multiple Instructor Requirement: None
- (5) Instructional Guidance: Lecture - Discussion - 20 min - SABC/The Chemical Environment: Nerve

Agents and Nerve Agent Antidotes Video

- (a) Contents of nerve agent kit
- (b) Use of the nerve agent kit
- (c) Signs and symptoms of nerve agent poisoning
- (d) Written/Oral quiz - 5 min

1. **THE CHEMICAL ENVIRONMENT** - NATO's definition of a chemical agent: A chemical which is intended for use in military operations to kill, seriously injure or incapacitate man because of its physiological effects.

A. History

- (1) First used in WWI (1914-1918) - into favorable winds chlorine gases released
- (2) First protection against chemical agents - cotton pads soaked with glycerin and sodium carbonate
- (3) Blister agents first used in 1917 - effective against men with the new masks
- (4) Agents were not used in WWII, but at the end of the war there were large stockpiles of nerve agents found. These were found to be very effective in low concentrations.
- (5) More recently central nervous system gases were used in Southeast Asia to support tactical operations
 - (a) Used to flush out guerrillas
 - (b) Used to render hiding places unusable

B. Physical and chemical properties

- (1) Persistency - agents are divided into two main categories:
 - (a) Non-persistent: disperse rapidly, present an immediate short term hazard, released as airborne particles, liquid or gas
 - (b) Persistent: present a hazard for some time after delivery by a contact hazard or vaporizing to produce an inhalation hazard
 - (c) Effectiveness: varies from situation to situation, type of agent, protection used, weather, terrain, and how it's dispersed
- (2) Characteristics:
 - (a) Physical: can be gaseous, liquid or solid, vapor density may be lighter than air or much heavier, may have no odor or have a real bad odor, may or may not be soluble in water
 - (b) Chemical: required to be sufficiently stable to survive disruption and transportation to the site of action
 - (c) Toxicological: reactions will vary from person to person according to race, sex, age, protection

used, amount of agent and how it's received

C. Nerve agent pretreatment

- (1) Pyridostigmine Pretreatment Tablet Set
 - (a) Consists of a pack of 21 tablets
 - (b) Taken only when directed by your commander
- (2) Taking the tablets
 - (a) Upon orders, take the first pyridostigmine tablet and continue to take one tablet every eight hours until they are gone or directed to stop by your commander
 - (b) Do not take more than one tablet at a time even if you have missed an earlier dose

D. Nerve agent antidote kit

- (1) Contents
 - (a) Nerve agent antidote set consists of two autoinjectors, you should be issued 3 sets per individual
 - (b) The smaller injector (AtroPen) contains atropine
 - (c) The larger injector contains Pralidoxime chloride

E. Use of kit

- (1) Mild nerve agent poisoning
 - (a) Use one set of autoinjectors (one AtroPen followed by one pralidoxime chloride autoinjectors)
 - (b) 5-10 minutes after injection

If heart beats rapidly and your mouth becomes dry, you have received enough medication do not administer any more
 - (c) 10-15 minutes after injection

If signs and symptoms remain administer another set of autoinjectors
 - (d) Do not administer more than three sets of autoinjectors to any individual
- (2) Casualty with severe nerve agent poisoning

- (a) Put the mask on the casualty
- (b) Inject three sets of auto-injectors into casualty's outer thigh or upper buttock
 - 1 Use the casualties injectors not yours
 - 2 You may need to treat yourself

F. Purpose of antidote injectors

- (1) Injectors are individually issued antidotes used to counteract the lethal effects of nerve agent exposure
- (2) Injectors are used when nerve agent symptoms occur
 - (a) Because of the immediate and lethal effects of nerve agents, self administered antidote injection(s) must be given immediately following an attack when the primary symptoms of poisoning occur
 - (b) The 2 primary symptoms are:
 - 1 Involuntary muscle twitching
 - 2 Pinpoint pupils
- (3) Description of the automatic injector
 - (a) Injector tube
 - 1 Contains the nerve agent antidote solution
 - 2 Pressure-sensitive needle trigger mechanism and injector needle
 - (b) Safety cap
 - 1 Prevents accidental triggering
 - 2 Do not remove cap until ready to use
 - (c) Pressure sensitive injection end
 - 1 Injection of the automatic injector is a perforated cap through which the needle and antidote are automatically activated
 - 2 Needle is triggered when pressure is applied to the perforated cap
- (4) Procedure
 - (a) Remove protective wrapper from the injector

- (b) Remove the injector safety cap or the autoinjector will not work
 - (c) Press the injector firmly against the thigh muscle for 10 seconds, it'll trigger automatically
 - (d) Pull the needle out after injection
 - (e) Massage the injection area to aid in absorption
 - (f) Pin the injector to the front pocket of jacket, this will inform others of your medical status should you be unconscious later
- (5) Issue instructions
 - (a) Issue item and medically controlled
 - (b) Specific instruction will be given when injectors are issued
 - (6) Use the buddy system in chemical threat conditions
 - (a) Involves observing others in the immediate area
 - (b) Signs and Symptoms may be difficult to see when wearing the protective suit

G. Signs and symptoms of mild nerve agent poisoning

- (1) Unexplained runny nose
- (2) Unexplained sudden headache
- (3) Excessive sudden drooling
- (4) Dimness of vision (due to pinpointing of pupils)
- (5) Tightness of the chest, creating difficulty in breathing
- (6) Localized sweating and muscular twitching in area of contamination
- (7) Stomach cramps
- (8) Nausea

H. Signs and symptoms of severe nerve agent poisoning

- (1) Strange and confused behavior
- (2) Wheezing and difficulty breathing and coughing
- (3) Pinpointed pupils
- (4) Red eyes with tearing
- (5) Vomiting

- (6) Severe muscular twitching and generalized weakness
- (7) Uncontrolled passing of urine and stool
- (8) Seizures/Unconsciousness/Cessation of breathing
- (9) Death

CHEMICAL AGENTS**SABC TEST QUESTIONS**

Directions: select the most correct answer from the choices listed, for each question. You must correctly answer 3 out of 5 of the following questions to pass.

1. The symptoms of mild nerve agent poisoning are?
 - a. Pinpoint pupils
 - b. Drooling
 - c. Tightness in the chest and breathing difficulty.
 - d. All of the above

2. If you experience the symptoms of nerve agent poisoning you should immediately inject yourself with all three sets of autoinjectors.
 - A. True
 - b. False

3. Self injections should be made into _____.
 - A. The foot
 - B. The arm
 - c. The hand
 - d. The thigh

4. You have received enough medication if your mouth becomes dry and your heart beats rapidly 5-10 minutes after the injections.
 - A. True
 - b. False

5. You should never use more than _____ sets of injectors without approval of medical personnel.
 - A. 2
 - B. 5
 - c. 4
 - d. 3

2. HEAT RELATED INJURIES

OVERVIEW AND GUIDANCE

A. Objectives: By the end of this lesson, the participant should be able to:

- (1) Describe signs and symptoms of heat cramps, heat exhaustion and heat stroke
- (2) List first aid treatment for those conditions listed above

B. Support Material and Guidance

- (1) Student Instructional Material: Student note taking device
- (2) Audiovisual Aids: None
- (3) Training Equipment: Old clothes/ uniforms and sheets
- (4) Multiple Instructor Requirement: 1 Instructor per 10 Students
- (5) Instructional Guidance: Lecture - Discussion - 10 min
 - (a) Signs and Symptoms of heat related injuries:
 - 1 Heat cramps
 - 2 Heat exhaustion
 - 3 Heat stroke
 - (b) First aid treatment:
 - 1 Heat cramps
 - 2 Heat exhaustion
 - 3 Heat stroke

2. HEAT RELATED INJURIES

- A. Definition:** The human body is absolutely dependent upon water to cool itself in hot environments. In severe heat it's possible for a person to lose a quart of water each hour. Water lost must be replaced or an individual can suffer a heat injury. Activity, temperature and acclimatization will determine the amount of fluid necessary to maintain proper body function.
- B. The 4 basic factors that determine the degree of heat stress exerted by the environment**
- (1) Air temperature
 - (2) Relative humidity
 - (3) Air movement
 - (4) Heat radiation
- C. Signs and Symptoms of heat related injuries**
- (1) Heat cramps
 - (a) Spasms, usually in the leg muscles or arms
 - (b) Resulting from strenuous exercise
 - (c) Caused by loss of salt in the body
 - (2) Heat exhaustion
 - (a) Weak, dizzy or feeling faint
 - (b) Headache, nauseous, loss of appetite
 - (c) Skin becomes cool, gray with lots of sweating
 - (d) This is the most common illness caused by heat
 - (3) Heat stroke
 - (a) Skin is red, dry and very hot to the touch
 - (b) No sweating, body has lost the ability to perspire
 - (c) Most dangerous type of heat injury and is an immediate life-threatening condition
 - (d) Temperature is very high, going up to 108 and more
- D. Treatment for heat related injuries**
- (1) Heat cramps

- (a) Rest
- (b) Move to cool place
- (c) Force victim to drink cold water with 2 salt tablets in each canteen of water

(2) Heat exhaustion

- (a) Treat for shock
- (b) Place them in a cool environment
- (c) Loosen or remove clothing
- (d) Lie the victim down
- (e) Quickly lower the victim's body temperature
 - 1 Wet the person down with water if needed
 - 2 Fan them if needed
 - 3 Do not allow the patient to shiver, this produces heat
- (f) If fully conscious, force victim to drink water with 2 salt tablets dissolved in each canteen of water
- (g) Protect from re-exposure
- (h) Seek medical attention

(3) Heat stroke

- (a) Treat for shock
- (b) Place them in a cool environment
- (c) Remove clothing
- (d) Lie the victim down
- (e) Quickly lower the victim's body temperature
 - 1 Wet the person down with water
 - 2 Fan them
 - 3 Do not allow the patient to shiver, this produces heat
- (f) If fully conscious, force victim to drink water with 2 salt tablets dissolved in each canteen of water

- (g) Protect from re-exposure
- (h) Seek medical attention

3. COLD RELATED INJURIES

OVERVIEW AND GUIDANCE

A. Objectives: By the end of this lesson, the participant should be able to:

- (1) State the signs and symptoms of frostnip and frostbite
- (2) State the signs and symptoms of hypothermia
- (3) State the treatment for cold injuries

B. Support Material and Guidance

- (1) Student Instructional Material: Student note taking device
- (2) Audiovisual Aids: None
- (3) Training Equipment: None
- (4) Multiple Instructor Requirement: 1 Instructor: 10 Students
- (5) Instructional Guidance: Lecture - Discussion - 10 min

Cold Related Injuries

- (a) Recognition of early cold injuries
- (b) Recognition of Hypothermia
- (c) Treatment for cold related injuries

3. COLD RELATED INJURIES

A. Definition:

- (1) Frostnip - A partial freezing of the skin or tissues
- (2) Frostbite - A freezing of the skin and deeper tissue
- (3) Hypothermia - A gradual lowering of the internal body temperature, below 90 degrees, due to over-exposure to the cold

B. Frostnip

- (1) With early exposure to the cold the skin begins to turn red
- (2) Fluid inside tissue cells begin to freeze and affected area will feel numb to victim
- (3) Minutes later it becomes white

C. Frostbite

- (1) Occurs when frostnip goes untreated
- (2) Skin is white or has a waxy appearance
- (3) The skin is hard to the touch
- (4) The entire tissue begins to freeze and becomes numb

D. Hypothermia

- (1) Definition - gradual lowering of the internal body temperature below 95 degrees
- (2) Common causes
 - (a) Wind chill factor
 - (b) Inadequate clothing
 - (c) Fatigue
 - (d) Poor health
- (3) Recognition or early detection
 - (a) Use an ungloved hand against the victim's back or chest
 - 1 If the victim's body is cold, mild to moderate hypothermia is likely
 - 2 If warm, may be normal or suffer mild

hypothermia

- (b) May be violently shivering
 - 1 This is the body's first defense against hypothermia
 - 2 The body attempting to generate heat
- (c) No shivering
 - 1 The body has lost this function
 - 2 The brain is losing oxygen
 - 3 The brain informs the body to slow down even further
 - 4 Hypothermia has set in
- (d) They may act confused
 - 1 That part of the brain that controls judgment, coordination and rational behavior is not receiving enough oxygen
 - 2 The victim is unaware of his behavior
- (e) May appear dead
 - 1 The body is barely functioning
 - 2 The victim may only breathe once or twice a minute
 - 3 Their heart may only beat a few times a minute
 - 4 Remember, they're not dead until they're warm and dead

(4) Treatment

- (a) Treat very gently
- (b) Prevent further heat loss
 - 1 Move to warm environment (do not warm victim too quickly)
 - 2 70-80 degrees if possible
 - 3 Remove wet clothing
- (c) Don't rub body parts

- 1 Ice crystals in the tissues can cause further injury
 - 2 The sharp edges of the crystals lacerate tissue
- (d) Do not give alcohol
 - 1 Alcohol is a depressant type drug
 - 2 It will further compound the hypothermia problem by depressing the victim's body functions further
- (e) CPR may be required
 - 1 Attempt to feel for a carotid pulse for 5-10 secs
 - 2 Do not attempt CPR if
 - a You see ice crystal formations in the back of the throat
 - b Chest is too stiff to compress

4. BURN INJURIES

OVERVIEW AND GUIDANCE

A. **Objectives:** By the end of this lesson, the participant should be able to:

- (1) Describe signs and symptoms of first degree burn, second degree and third degree burns
- (2) List first aid treatment for those conditions listed above

B. **Support Material and Guidance**

- (1) Student Instructional Material: Student note taking device
- (2) Audiovisual Aids: None
- (3) Training Equipment: Old clothes/ uniforms and sheets
- (4) Multiple Instructor Requirement: 1 Instructor: 10 Students
- (5) Instructional Guidance: Lecture - Discussion - 10 min, Demonstration - 20 min

Burn Injuries

- (a) Signs and Symptoms of burn injuries
 - 1 1st degree
 - 2 2nd degree
 - 3 3rd degree
- (b) First aid treatment for the conditions of
 - 1 1st degree
 - 2 2nd degree
 - 3 3rd degree

4. BURN INJURIES

- A. Definition:** A burn is an injury that results from a heat source. It may be thermal, electrical, chemical or radiation. It will vary in depth, size, and severity causing injury to cells in the affected area.
- B. Causes**
- (1) Thermal
 - (a) Flame (hot objects, hot liquids)
 - (b) Hot liquids (gases by nuclear blast or fireball)
 - (2) Electrical
 - (a) High voltage lines
 - (b) Household current
 - (3) Chemical
 - (a) Aviation fuels
 - (b) Terrorist attacks
 - (c) Caused by contact with wet or dry chemicals
 - (4) Radiation
 - (a) Nuclear detonation
 - (b) High energy transmitters
- C. Classification is done by depth of burn and amount of damage to the skin**
- (1) 1st degree burn
 - (a) Only the top layer is burned
 - (b) Skin becomes reddened
 - (c) Painful with slight swelling
 - (d) Example: sunburn
 - (2) 2nd degree burn
 - (a) Top 2 layers of skin is burned
 - (b) May have some or all of the signs and symptoms of 1st degree burn plus blisters will appear
 - (c) Painful

- (d) Example: flash flame, scald
- (3) 3rd degree burn
 - (a) All layers of the skin are burned
 - (b) May have some or all of the signs and symptoms of 1st and 2nd degree burns plus the skin will be charred
 - (c) Charred skin will not be painful because all the nerves in that area are destroyed (white or grayish color)
 - (d) Fire burns
- (4) Critical Burns
 - (a) Burns of the face
 - 1 May burn the respiratory tract
 - 2 May cause breathing difficulty
 - (b) 2nd degree burns of more than 30% of the body surface
 - 1 Cause a concern for fluid loss
 - 2 Increase risk of infection
 - (c) 3rd degree burns of the genitalia, hands, face and feet
 - 1 May lose function if left unattended
 - 2 Risk of infection
 - (d) 3rd degree burns of more than 10% of the body surface
 - 1 Cause a concern for fluid loss
 - 2 Increase risk of infection

D. Treatment for the burn injury

- (1) Thermal injuries
 - (a) 1st degree burn
 - 1 Stop the burning process
 - 2 Apply cool water to affected area

- (b) Treat any other obvious injuries
- (c) Treat for shock
- (d) Transport to medical facility

5. PSYCHOLOGICAL EMERGENCIES**OVERVIEW AND GUIDANCE**

A. Objectives: By the end of this lesson, the participant should be able to list first aid treatment for the psychologically impaired victim

B. Support Material and Guidance

- (1) Student Instructional Material: Student note taking device
- (2) Audiovisual Aids: None
- (3) Training Equipment: None
- (4) Multiple Instructor Requirement: 1 Instructor: 10 Students
- (5) Instructional Guidance: Lecture - Discussion - 10 min

Psychological Emergencies

- (a) Goals of treatment
- (b) Principles of treatment
- (c) Treatment

5. **PSYCHOLOGICAL EMERGENCIES** - Psychological problems are just as real and dangerous as other medical disorders. Examples: battlefield stress, depression, aggression, etc.
 - A. The goal of treatment for the psychologically impaired victim
 - (1) Return the victim to duty ASAP
 - (2) Minimize immediate disability
 - (3) Decrease intensity of emotional reaction
 - B. Principles of treatment
 - (1) Respects everyone's right to their own feelings
 - (2) Accept emotional disability as being real as physical disorders
 - (3) There's an emotional reaction attached to all physical injuries
 - (4) There's more strength in a disturbed person than what appears
 - C. Treatment
 - (1) Use things that are familiar to the victim like name and friends to aid in the ability to overcome fear
 - (2) Encourage the victim to talk
 - (3) Activity will help control fear
 - (4) Give clear and simple instructions
 - (5) Do not allow your actions to hinder your ability to render assistance
 - (6) Guard against impatience
 - (7) Don't become over sympathetic
 - (8) Help the victim regain confidence
 - (9) Let the victim know you expect them to recover

Local Area Protocols
for
Environmental Emergencies
(If applicable identify specific protocol(s) for
Burns, Heat or Cold Related Injuries)

SECTION D

1. VICTIM ASSESSMENT

OVERVIEW AND GUIDANCE

A. Objectives: By the end of this lesson, the participant should be able to:

List the steps needed to perform a patient assessment

B. Support Material and Guidance

- (1) Student Instructional Material: Student note taking device
- (2) Audiovisual Aids: None
- (3) Training Equipment: None
- (4) Multiple Instructor Requirement: 1 Instructor: 10 Students
- (5) Instructional Guidance: Lecture - Discussion - 10 min

Victim Assessment

(a) Primary assessment

- 1 Airway
- 2 Breathing
- 3 Circulation
- 4 Disability

(b) Secondary assessment

- 1 Looking the body over for other injuries

1. VICTIM ASSESSMENT**A. The Primary Assessment**

- (1) Purpose is to find and treat the most life threatening emergencies affecting:
 - (a) Airway
 - (b) Breathing
 - (c) Circulation
 - (d) Disability
 - (e) Example:
 - 1 Opening an airway in an unconscious person
 - 2 Stopping arterial bleeding
 - 3 Controlling severe external hemorrhage

B. The Secondary Assessment

- (1) Purpose is to uncover all other injuries and attempt to stabilize and treat the problems found
- (2) Also known as a head-to-toe examination
- (3) Example:
 - (a) Splinting fractures
 - (b) Stopping external bleeding
 - (c) Treating burn injuries

2. TRIAGE

OVERVIEW AND GUIDANCE

A. **Objectives:** By the end of this lesson, the participant should be able to:

List the procedures in performing triage

B. Support Material and Guidance

- (1) Student Instructional Material: Student note taking device
- (2) Audiovisual Aids: None
- (3) Training Equipment: None
- (4) Multiple Instructor Requirement: 1 Instructor: 10 Students
- (5) Instructional Guidance: Lecture - Discussion - 10 min
 - (a) Definition/purpose
 - (b) Triage categories
 - 1 Minimal
 - 2 Immediate
 - 3 Delayed
 - 4 Expectant

2. TRIAGE

Definition: A French word meaning "to sort".

- A. Grouping of victims according to
 - (1) Seriousness of injury
 - (2) Type of injury
 - (3) Likelihood of survival
 - (4) The cardinal rule of triage is to do the greatest good for the greatest number

- B. Using this system will enable orderly and efficient use of
 - (1) Personnel
 - (2) Supplies
 - (3) Facilities

- C. Wartime casualties will be triaged as follows
 - (1) Minimal
 - (a) Victims who can be returned to duty with minimal treatment
 - (b) No priority for treatment
 - (c) Examples:
 - 1 Small lacerations
 - 2 Contusions with controlled bleeding
 - 3 Closed fractures of small bones

 - (2) Immediate
 - (a) Victims whose conditions are so urgent that immediate treatment is needed to save life or limb highest priority for treatment
 - (b) Example:
 - 1 Hemorrhage from easily controlled site
 - 2 Open chest or abdominal wounds
 - 3 Rapidly correctable respiratory defects
 - 4 Severe crushing injuries of extremities

- 5 Open fractures of long bones
 - 6 Incomplete amputations
 - (3) Delayed victims
 - (a) Victims whose injuries do not jeopardize life if definitive treatment is delayed. Injuries in this category usually require extensive surgery or medical care.
 - (b) Examples:
 - 1 Moderate lacerations without extensive bleeding
 - 2 Closed fractures of long bone
 - (4) Expectant
 - (a) Survivability poor even with prolonged and complicated treatment
 - (b) Lowest treatment priority
 - (c) Examples:
 - 1 Critical injuries to respiratory and central nervous system (broken neck)
 - 2 Significant penetrating abdominal wounds with organs exposed
 - 3 Decapitation

*Note: For ease of remembering the categories, the term "MIDE" may be helpful.

3. PATIENT TRANSPORTATION: MANUAL LIFTING AND LITTER CARRIES**OVERVIEW AND GUIDANCE****A. Objectives:** By the end of this lesson, the participant should be able to:

- (1) Perform one and two-person manual carries
- (2) Improvise a litter from blankets, poles, and shirts/jackets
- (3) Carry a victim on a litter

B. Support Material and Guidance

- (1) Student Instructional Material: Student note taking device
- (2) Audiovisual Aids: TV/VCR with SABC Video
- (3) Training Equipment: Litters, Poles, Blankets, Shirts/Jackets, Sacks
- (4) Multiple Instructor Requirement: 1 Instructor: 10 Students
- (5) Instructional Guidance: Lecture - Discussion - 10 min, Demonstration - 40 min

Patient Transportation: Manual Lifting and Litter Carries

- (a) Manual Carries
 - 1 One-person carries
 - 2 Two-person carries
- (b) Improvised litters
- (c) Carrying victims on litter

3. PATIENT TRANSPORTATION

- A. Must know how to transport without increasing seriousness of condition
- B. Two-Man Types of Transportation
 - (1) Manual
 - (2) Litter
- C. Before Moving Victim You Must:
 - (1) Check airway and respirations
 - (2) Evaluate type and extent of injury
 - (3) Insure bleeding controlled and dressings are adequate
 - (4) Ensure bones properly immobilized and supported

- D. If victim is conscious:
 - (1) Explain what you're doing
 - (2) Allay fear of movement
 - (3) Gain cooperation

- E. Manual Carries
 - (1) Accomplished by 1 or 2 bearers
 - (2) Use two-person carries whenever possible
 - (a) Provides more comfort
 - (b) Less likely to aggravate injuries
 - (3) Distance carried depends upon
 - (a) Strength/endurance of bearers
 - (b) Weight of victim
 - (c) Nature of injury
 - (d) Obstacles encountered
 - (4) One and Two person carries
 - (a) Clothes Drag - pull victim to safety by the collar, used in combat to move a victim quickly
 - (b) Ankle Drag - same as above but pull victim by the ankle
 - (c) Fireman's carry - not to be used on someone with questionable spinal cord injury
 - (d) The nine steps of the Fireman's carry are:
 - 1 Straddle the face down victim and lock your arm under their chest
 - 2 Walk back as you lift the victim to their knees
 - 3 Walk back until the victims legs straighten and their knees lock
 - 4 Walk forward until the victim is in the standing position but do not lean them forward
 - 5 Raise the victim's right arm so you can slip

under it and move around in front of them, now kick their feet 6-8 inches apart with your right foot

- 6 Raise the victim's right arm
- 7 Bend at the waist and knees and lower the victim over your left shoulder, grab the victim's right knee with your right hand
- 8 Grab the victim's right wrist with your right hand, put your left hand on your left knee
- 9 Push on your left knee with your left hand to help you stand, your left hand should be free for use as needed

- (e) Fore-and-Aft Carry - useful for long distances, the taller of the two bearers should be at the front
- (f) Two Hand Swing Carry - used for short distances, may be used on a conscious or unconscious victim
- (g) Four Hand Seat Carry - used for short distances, victim must be conscious

For example: Unconscious victim

F. Improvised Litters

- (1) Most flat objects of suitable size can be used
 - (a) Boards
 - (b) Benches
 - (c) Doors
 - (d) Ladders
 - (e) Cots
 - (f) Poles tied together
- (2) Objects should be padded
- (3) Satisfactory litters can be made by securing poles inside blankets, tarpaulins, jackets, shirts, bags (ensure jacket sleeves and shirts are turned inside out)
- (4) Poles can be made from
 - (a) Strong branches
 - (b) Unloaded rifles
 - (c) Tent supports

G. Techniques for carrying litter over rough ground

- (1) Preferable to have 4 bearers
 - (a) One at head (leader)
 - (b) One at foot
 - (c) One on each side
- (2) Each side-bearer holds side of litter with hand closest to victim
- (3) All bearers face same direction
- (4) All assume proper lifting position
- (5) At command "Lift" all stand
- (6) At command "March"
 - (a) Bearer at head steps off on right foot
 - (b) Other 3 step off on left foot
 - (c) If possible, carry victim's feet first
 - (d) Bearers all walk in same direction
- (7) To lower litter, use reverse procedures
- (8) If 2 bearers
 - (a) One at each end
 - (b) Head bearer is leader
 - (c) Step off on opposite feet

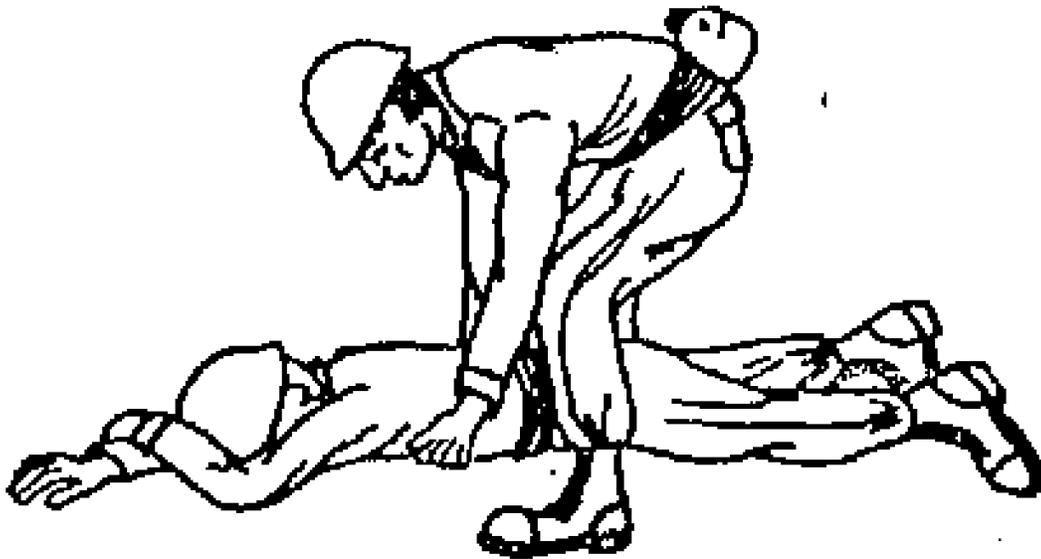
H. Techniques for carrying litter over smooth ground

- (1) Preferable to have four bearers
 - (a) One at each corner of the litter
 - (b) Bearer on the right and at the victim's head is in charge
- (2) All bearers face the same direction
- (3) All bearers assume the proper lifting position
- (4) At the command "Lift" all stand together
- (5) At command "March":

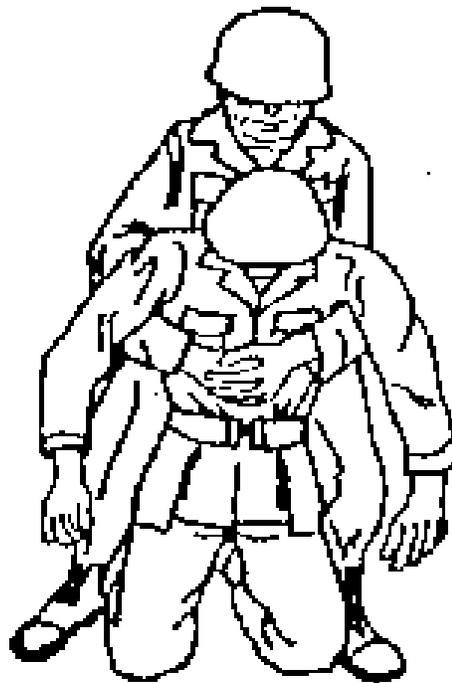
- (a) Front bearers take off on opposite feet as back bearers

SCHEMATICS OF MANUAL LIFTING AND LITTER CARRIES

Figure 1. Fireman's Carry.

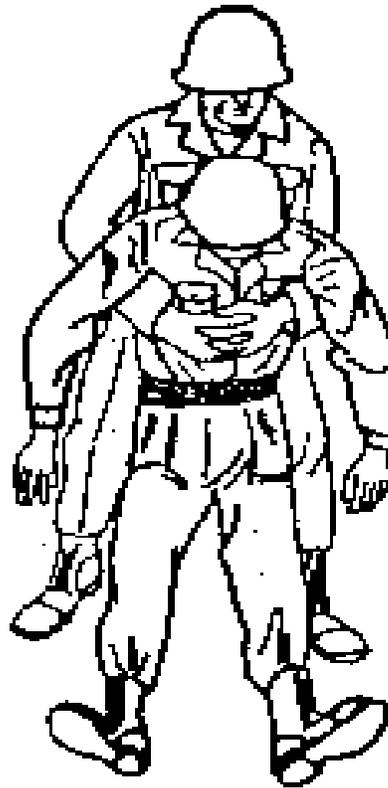


1.1. Roll the casualty into the prone position. Straddle the casualty and lock your hands under the casualty's chest.



1.2. Pull the casualty to the knees by moving backward.

Figure 1. Continued.



1.3. Continue to move backward until the casualty's legs are straight and knees are locked.



1.4. Walk forward while lifting with your arms until the casualty is in a standing position, leaning slightly back.

Figure 1. Continued.



1.5. Maintaining constant support with your left arm, use your right arm to hold the casualty's right arm high. Step under the right arm and turn to face the casualty.



1.6. Using your left hand, grasp the casualty's right wrist and raise it over your head.

Figure 1. Continued.

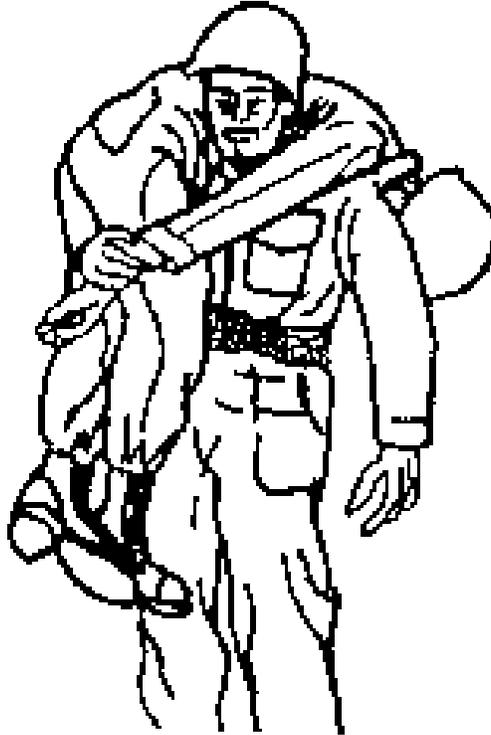


1.7. Bending at the waist and knees, pull the casualty's right arm over your shoulder and pass your right arm between the casualty's legs.



1.8. Grasp the casualty's right wrist with your right hand. Place your left hand on your left knee for support in rising.

Figure 1. Continued.



1.9. Position the casualty and then stand. Your left hand is free for use as needed.

ONE/TWO-MAN SUPPORT. Use for conscious casualties who are able to support their own weight on one leg. Since the casualty will be using the bearer(s) only as a crutch, it is not very tiring for the bearer(s). When performing the one-man support, position yourself on the casualty's affected side.

Figure 2. One/Two-Man Support.



2.1. Raise the casualty from the ground the same way as the fireman's carry.



2.2. Standing on the injured side, grasp one of the casualty's wrists and draw his/her arm around your neck. Place your other arm around the waist of the casualty.

Figure 2. Continued.



2.3. For Two-Man Support, the second bearer will perform Step 2 on the other side of the casualty.

NECK DRAG. A one-man carry used to transport conscious casualties behind low walls or shrubbery, under a vehicle or through a culvert. Use the helmet to protect the casualty's head from the ground.

Figure 3. Neck Drag.



1. Place casualty on back.
2. On hands and knees, bearer then straddles the casualty.
3. Casualty locks hands behind the bearer's neck.
4. Bearer then crawls, dragging casualty.

SADDLEBACK CARRY. A one-man carry used to transport conscious casualties.

Figure 4. Saddleback Carry.



4.1. Raise casualty to upright position in the same way as Fireman's Carry. Once raised, move in front of the casualty with your back to the casualty.



4.2. Have casualty place arms around your shoulders for support.

Figure 4. Continued.



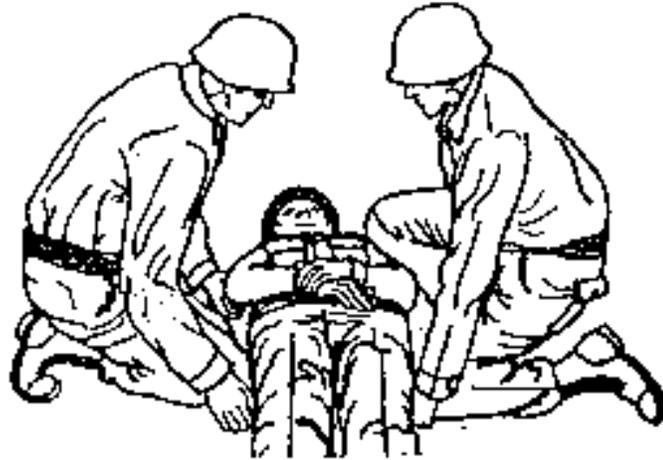
4.3. Bending at the knees with one foot in front of the other, hook your arms on the casualty's lower thighs.



4.4. Clasp your hands across your abdomen and stand.

TWO-HAND SEAT CARRY. A two-man carry used for conscious and unconscious casualties. Casualties with injuries to the thighs, hips or knees should not be transported using this carry because the casualty's weight is on the lower extremities during the carry.

Figure 5. Two-Hand Seat Carry.



5.1. With the casualty lying on back, one bearer kneels on either side of casualty at the hips. Note the bearer's knee closest to the casualty's feet is on the ground.



5.2. Each bearer places arms beneath casualty's upper back and thighs, then grasps the other bearer's wrists.

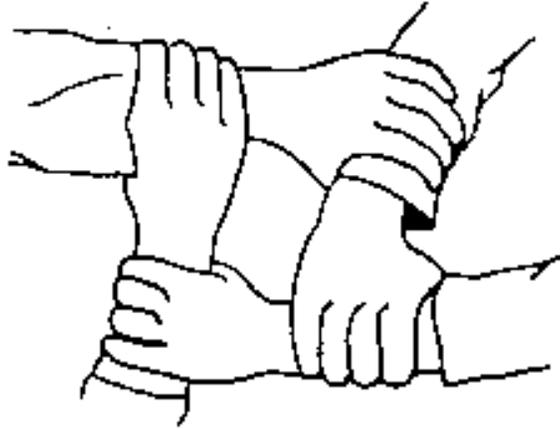
Figure 5. Continued.



5.3. Team Leader gives lifting commands to raise casualty.

FOUR-HAND SEAT CARRY. Because the casualty must hold onto the bearer's neck during this two-man carry, it can be used only for conscious casualties.

Figure 6. Four-Hand Seat Carry.



6.1. Each bearer grasps own wrist and one of the other bearer's wrists, forming a seat.



6.2. Bending at one knee, lower the seat until casualty can be seated. Have the casualty place an arm around the neck of both bearers.

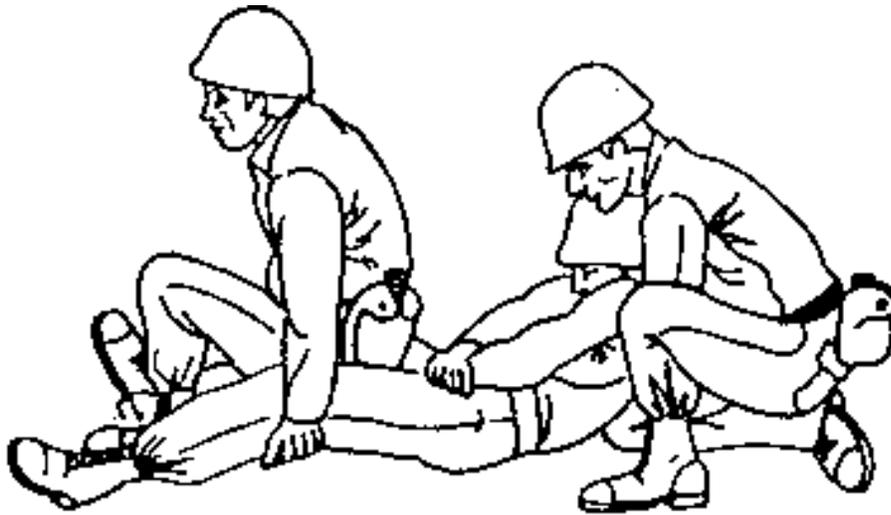
Figure 6. Continued.



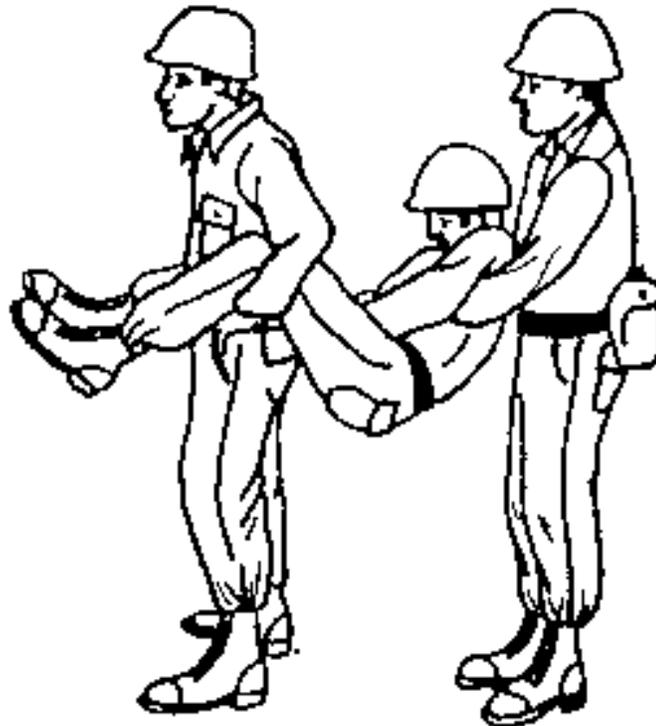
6.3. Team Leader gives lifting commands to stand.

FORE-AND-AFT CARRY. A two-man carry used for conscious and unconscious casualties. Used for rapid movement of casualty.

Figure 7. Fore-and-Aft Carry.



7.1. One bearer kneels between the casualty's legs, facing the casualty's feet, and positions his/her hands beneath the casualty's knees. The remaining bearer runs his/her hands under the casualty's armpits and locks hands across the casualty's chest. NOTE: The taller bearer should be at the casualty's head.



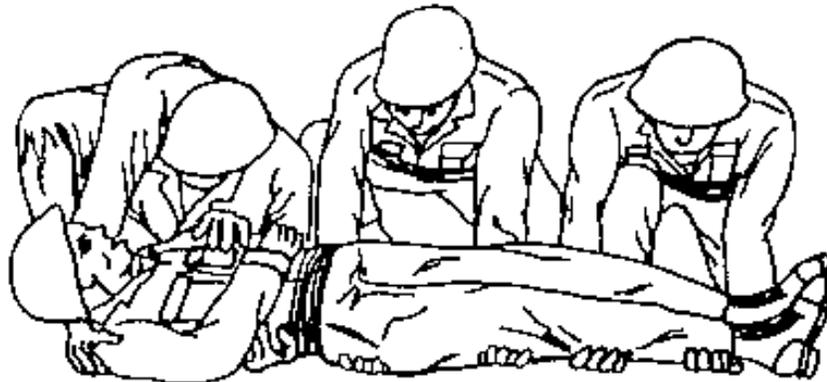
7.2. Bearer at the casualty's head gives lifting commands to stand.

THREE-MAN LIFT. Although any type of injury can be transported using this carry, it is the only carry which should be used to transport casualties with spinal or neck injuries. When sufficient bearers are available, and short distances need to be covered, it is the carry of choice for any type of injury. It is also particularly useful for transporting abdominal injuries and placing casualties on a litter.

Figure 8. Three-Man Lift.

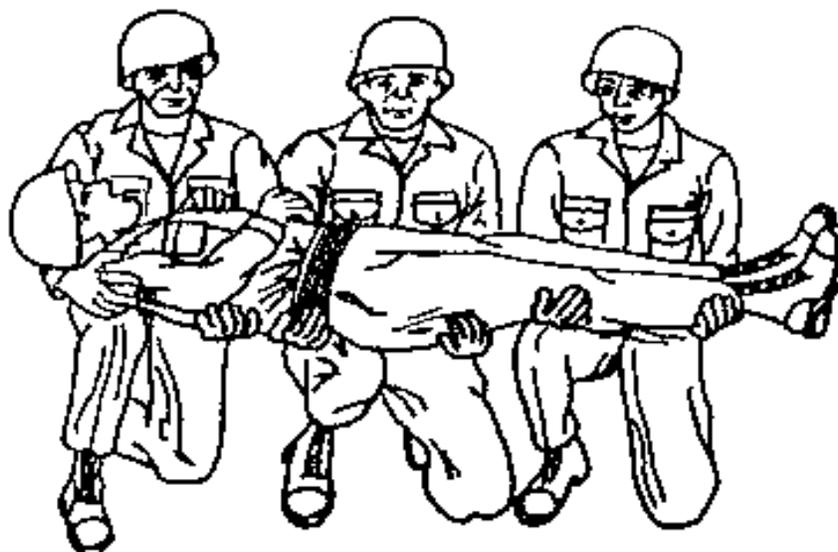


8.1. Three bearers kneel on the uninjured side of the casualty with the knee closest to the casualty's feet on the ground.



8.2. Bearer #1 (at the casualty's head) places one arm under the head, neck, and shoulders and the other under the upper back. Bearer #2 places one arm beneath the lower back and one beneath the upper thighs. Bearer #3 places one arm beneath the lower thighs and one beneath the ankles.

Figure 8. Continued.

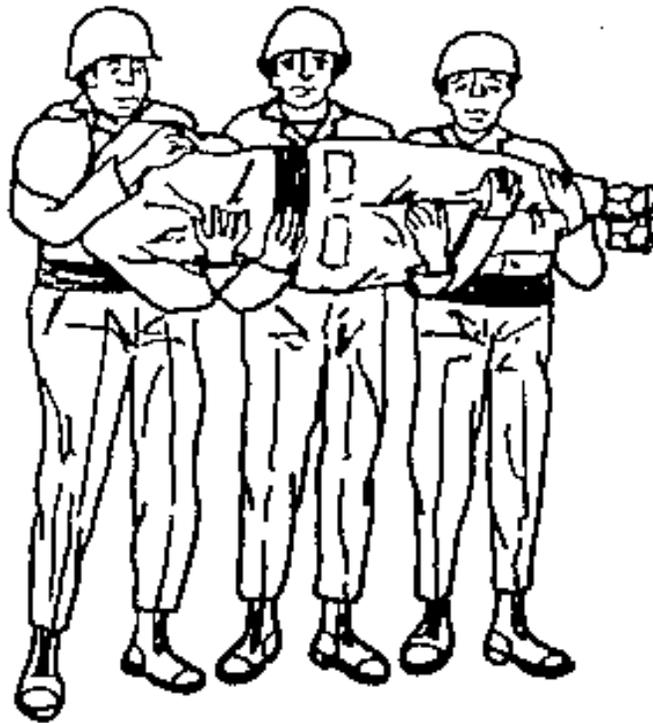


8.3. The Team Leader (at the casualty's head) gives lifting commands and the casualty is brought to the bearer's knees.



8.4. Team Leader gives lifting commands and bearers stand.

Figure 8. Continued.



8.5. Casualty can be rolled so that his/her chest rests against the bearer's chests. This will allow the casualty to vomit without danger of aspiration.

Figure 9. Opening the Standard Field Litter.



9.1. Stand litter on end and step downward with boot toe.



9.2. Invert the litter and repeat the procedure.

To close the litter, place it on its side and, using both hands, grasp the pole that is not on the ground; next, tap inward on the spreader bars with the heel of your boot until the tension is released. When both spreader bars have been released, the litter will collapse. Fanfold the canvas, secure the tie straps and the litter is ready for storage. **NEVER USE YOUR HANDS ON THE SPREADER BARS!**

TERMINOLOGY:

FRONT OF THE LITTER: The end of the litter pointed *in* the direction of travel.

REAR OF THE LITTER: The end of the litter pointed *away* from the direction of travel.

HEAD OF THE LITTER: The end of the litter where the casualty's head is located.

DIRECTION OF TRAVEL: The direction which you intend to move the casualty. It is important to understand that although a casualty is transported in the feet-first position on level ground, changes in the terrain encountered mean that the litter may have to be rotated to a head-first position; or the number and position of bearers on the litter team may have to be changed.

TRANSFERRING THE CASUALTY TO THE LITTER: The 3-man lift is the manual carry of choice for placing the casualty on the litter. To modify this carry for litter transfer, a fourth member, usually the litter team leader, is required. He/she is responsible for placing the litter beneath the casualty while the casualty is resting on the bearer's knees. (See Figure 4.)

Once the casualty is in place on the litter, a minimum of two litter straps should be used to secure the casualty to the litter. Litter straps are normally placed across the chest and mid thigh. The arms should be enclosed only if the casualty is unconscious or restraining the arms will facilitate treatment (i.e., splints or Ivs).

Figure 10. Transferring the Casualty to the Litter.



10.1. Litter is placed on the ground, alongside the casualty, between three aligned bearers and the team leader.



10.2. Team leader gives lifting commands. The casualty is raised to the bearer's knees. Team leader positions the litter under the casualty.

Figure 10. Continued.

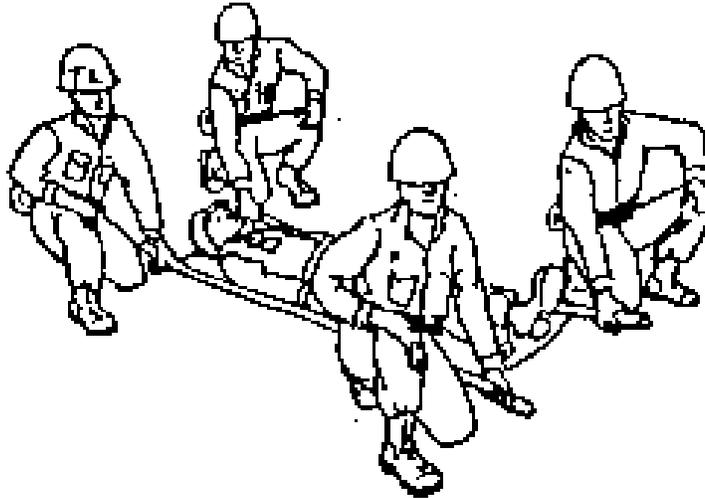


10.3. Team leader gives lowering commands and casualty is lowered to litter and secured.

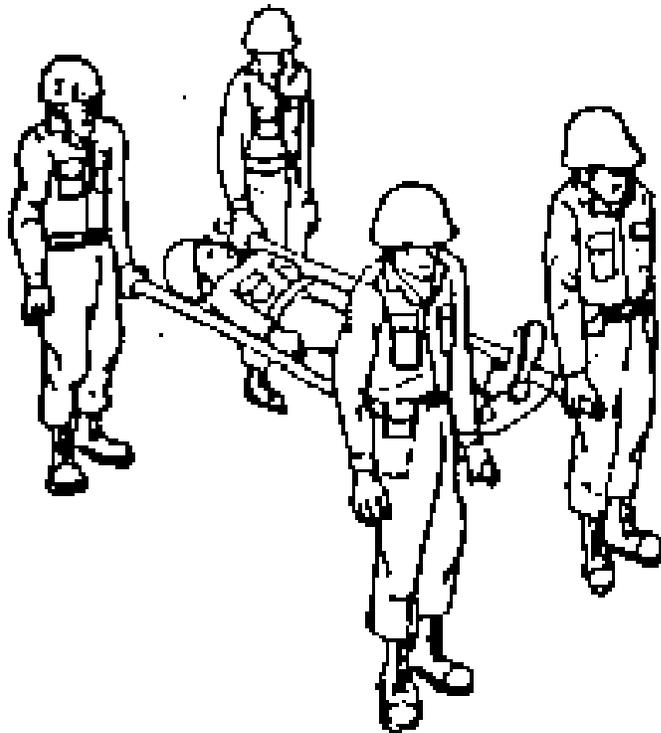
TRANSPORTING THE CASUALTY

FOUR-MAN CARRY: Used when the terrain is smooth and level. The litter team leader, usually the senior individual or, if the team is composed of non-medical members, the individual with the most medical training, is positioned at the rear of the litter, on the casualty's right, with a full view of the casualty and equipment.

Figure 11. Four-Man Carry.



11.1. At the preparatory command, "Prepare to lift," each bearer kneels on the knee closest to the litter, grasps the litter handle, and places the free hand on the upright knee.



11.2. At the command of execution, "Lift," all bearers rise together, keeping the litter level.

LITTER POST CARRY. Used to carry the litter when changing direction of travel (uphill or downhill) or to improve litter stability when moving through rough terrain (i.e., foot entanglements). This is a complicated carry involving several changes in position for the bearers. Good communication between all team members is a must.

Figure 12. Litter Post Carry.



12.1. With commands "Litter post carry, move," "change into a two-man carry." Team leader and free front bearer then grasp litter at sides, with team leader on the casualty's right.

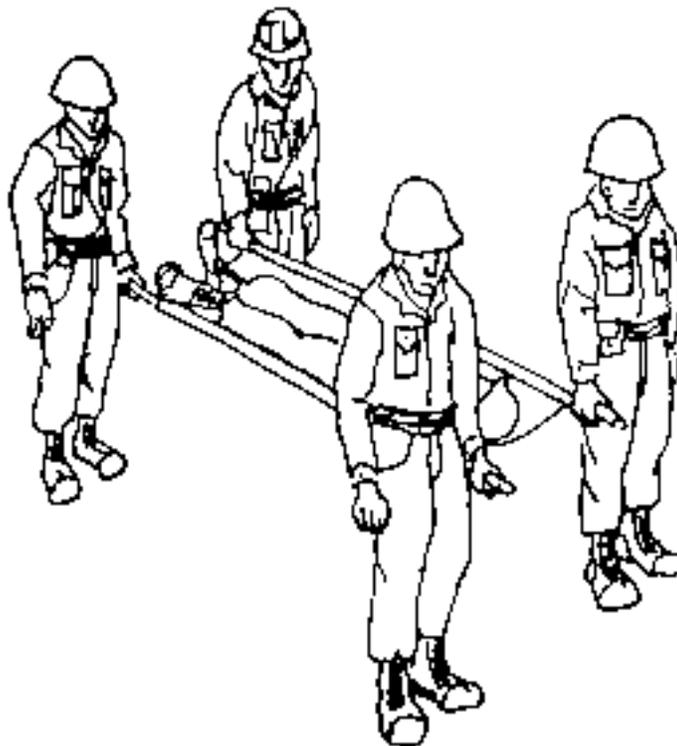


12.2. Front and rear bearers release weight of litter and step away. Commands are, "Prepare to rotate, rotate." Side bearers rotate litter counter-clockwise 180 degrees.

Figure 12. Continued.



12.3. Front and rear bearers resume their original position and take the weight of the litter. Team returns to four-man carry with commands, "Four-man carry, move."



12.4. Note that the litter team leader is still on the casualty's right at the rear of the litter.

UPHILL CARRY. When traveling uphill, rotate the litter into a head first position. Once the litter is rotated for an uphill carry, the foot of the litter is in the rear. This keeps the casualty's head closest to the ground in case the litter is dropped.

Figure 13. Uphill Carry.



13.1. When front and rear team members assume original position, Team Leader commands, "Uphill carry, move."



13.2. Left side bearer moves to foot of litter and takes left post. Rear center bearer takes right post. Team Leader steps in front of front bearer.

NOTE: Rear members are responsible for keeping the litter level as they move uphill. Upon reaching the top of the hill, the Team Leader calls the team to a halt.

Figure 13. Continued.



13.3. Team Leader commands, "Litter post carry, move." Team Leader steps to R side, R rear bearer moves to center rear and L rear bearer moves to L side position.



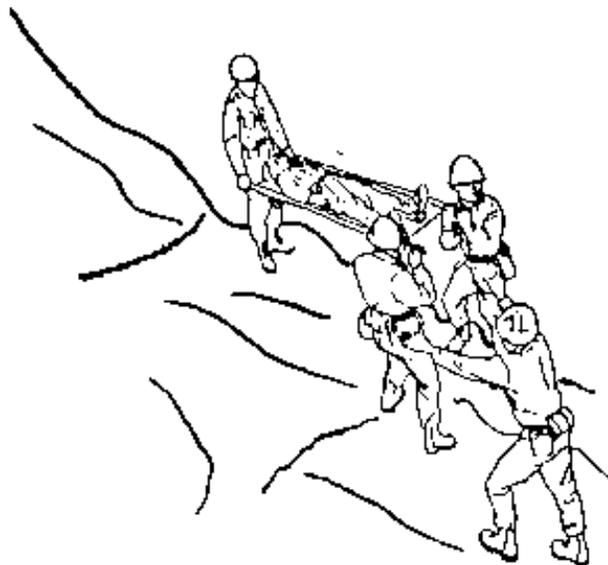
13.4. Team Leader gives command, "Prepare to rotate, rotate." Team Leader gives command, "Four-man carry, move." Members then move to correct positions.

DOWNHILL CARRY. When traveling downhill, rotate the litter into a feet-first position. Once the litter is rotated for a downhill carry, the foot of the litter is the front.

Figure 14. Downhill Carry.

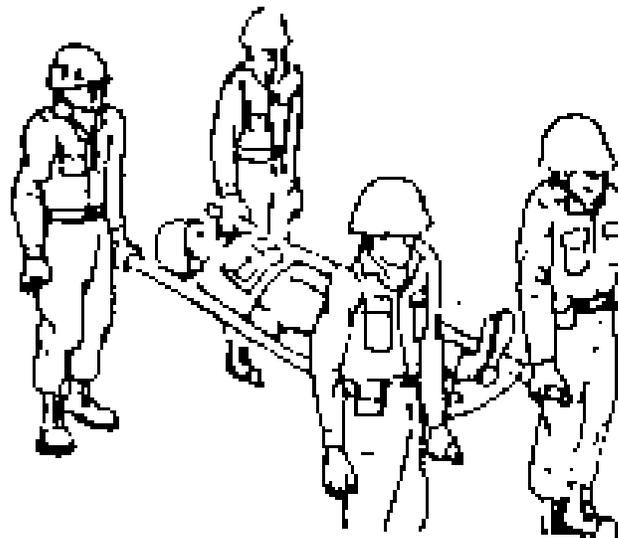


14.1. With the litter team in the four-man carry position, the Team Leader gives the command, "Downhill carry, move." R rear bearer takes full support of the litter at the patient's head and the front bearers turn and face each other.



14.2. Team Leader moves to the front, facing the team. He supports the front bearers at the waist and hip area, and insures that they keep the litter level as they move downhill.

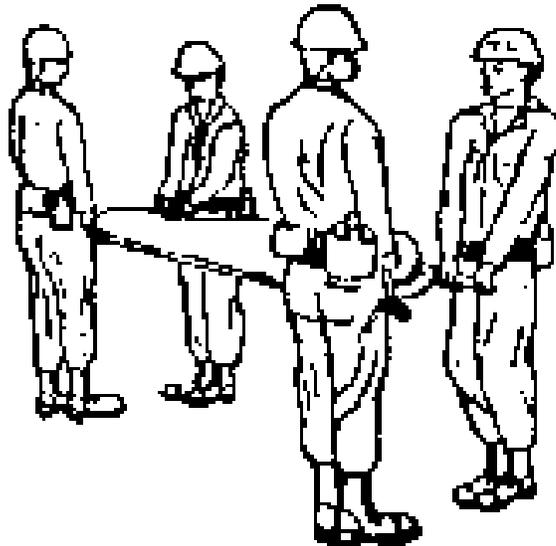
Figure 14. Continued.



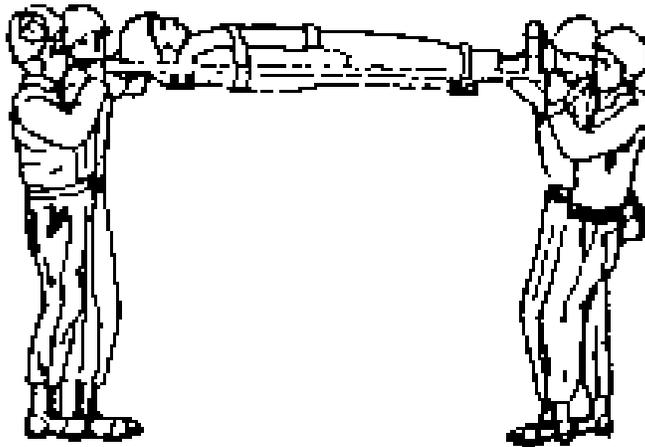
14.3. Upon reaching level ground, the Team Leader calls the team to a halt and moves back to the R rear position and the team proceeds as necessary.

OVERHEAD CARRY. Used to move over high/low walls. When attempting to cross obstacles (walls, trenches, etc.), bearer alignment must be changed to facilitate moving over and through the obstacle.

Figure 15. Overhead Carry.

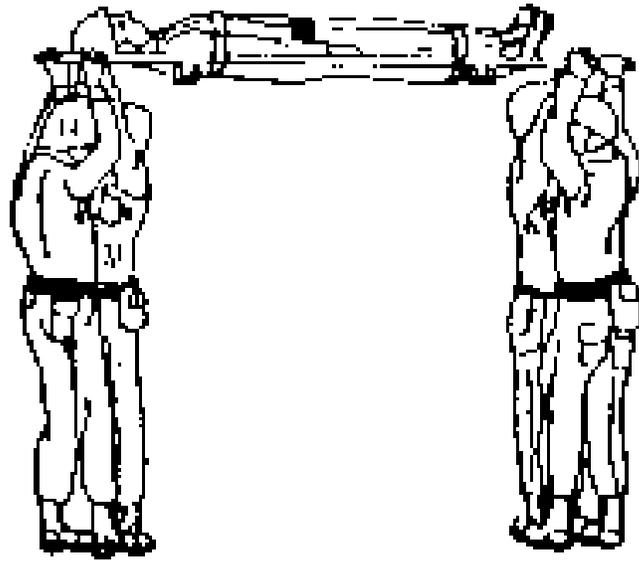


15.1. At command, "Overhead carry, move," team members turn inward, facing each other.



15.2. Team Leader gives lifting commands and litter is raised to the shoulder height of shortest team member

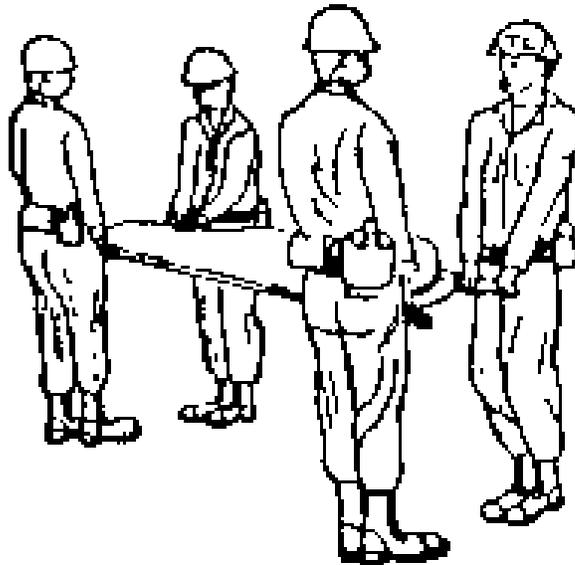
Figure 15. Continued.



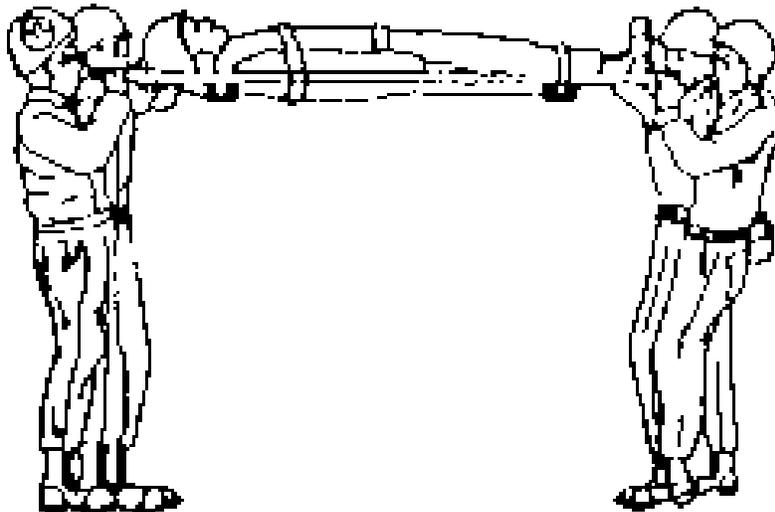
15.3. Team Leader repeats lifting commands and litter is lifted to height of obstacle.

FULL OVERHEAD CARRY. Used to move litters across streams deep enough to prevent safe carries at waist height, and through low brush which might cause additional injury to the casualty.

Figure 16. Full Overhead Carry.

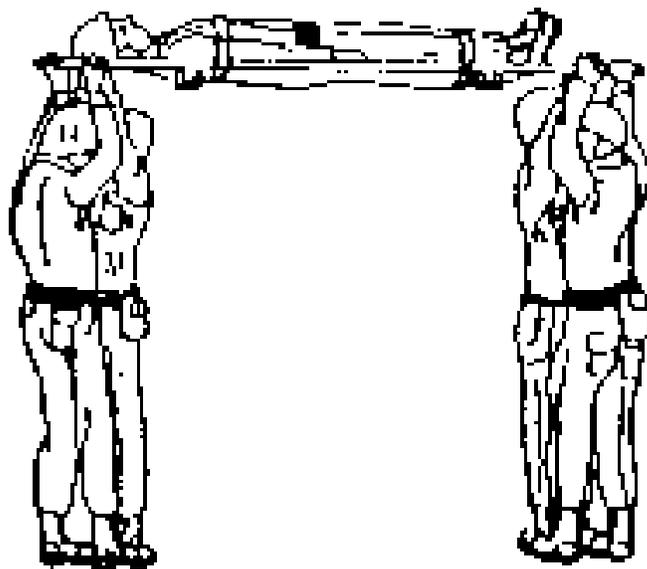


16.1. At command, "Overhead carry, move," team members turn inward, facing each other.

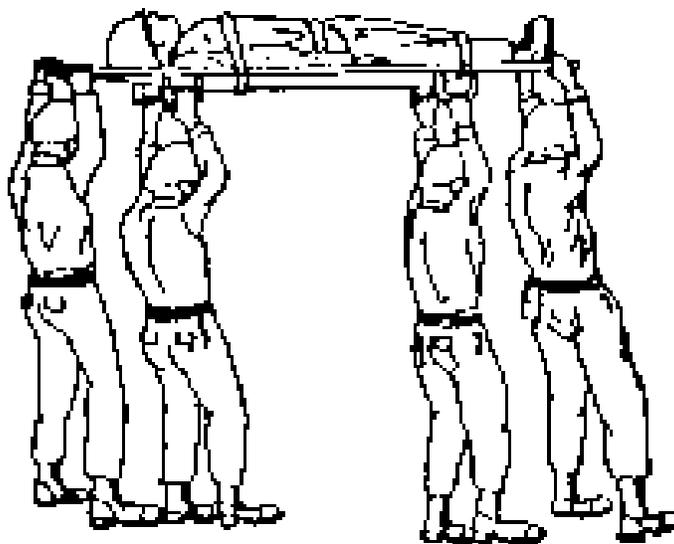


16.2. Team Leader gives lifting commands and litter is raised to the shoulder height of shortest team member.

Figure 16. Continued.



16.3. Team Leader repeats lifting commands and litter is lifted overhead.



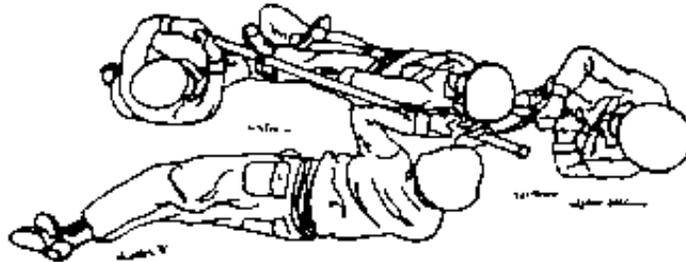
16.4. Taller team members take control of litter at each end of litter poles. Shorter team members move under litter and remain prepared to catch litter if taller bearers stumble.

LOW CARRY. Used to move under low obstacles, or to move the litter under hostile fire. Take care to protect the casualty's face by covering it with a helmet. Do not push or drag the litter as this can result in injuries to the bearer's hands or collapse of the litter.

Figure 17. Low Carry.



17.1. Beginning with the four-man carry, lower litter quickly and safely at command, "Low crawl."



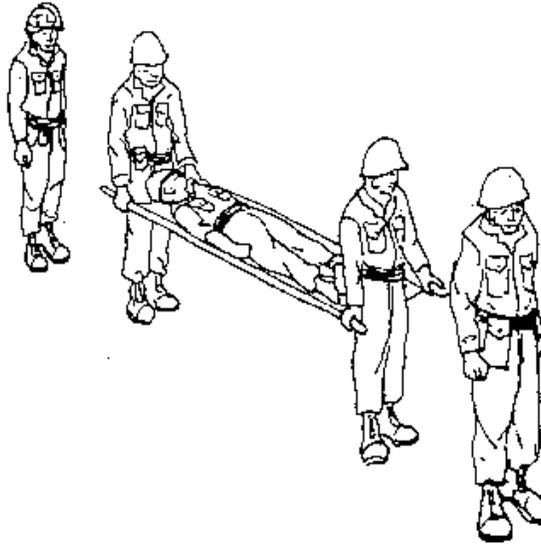
17.2. Each team member lies on shoulder facing litter with front members at a 45 degree angle and rear members aligned straight back.



17.3. Using lifting commands to move litter in a "hopping" motion. The litter should be raised approximately 6" with every forward move. Team members should move only while litter is on the ground.

TWO-MAN CARRY. Used to enable the litter team to pass through or over narrow passages, such as trails, bridges, gang-planks or catwalks.

Figure 18. Two-Man Carry.

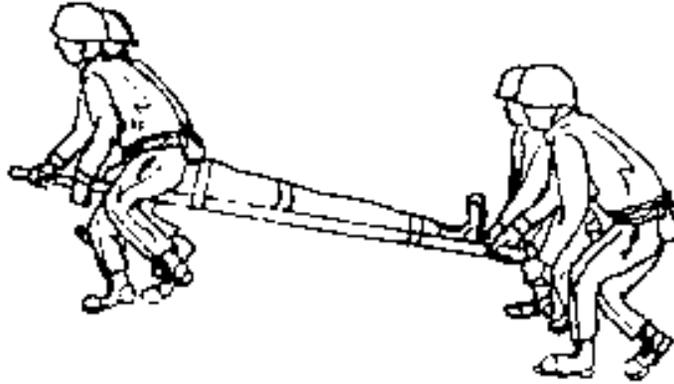


With the litter team in the four-man carry position, the Team Leader gives the command, "Two-man carry, move." The right front and left rear bearers grasp both handles and assume responsibility for the weight of the litter.

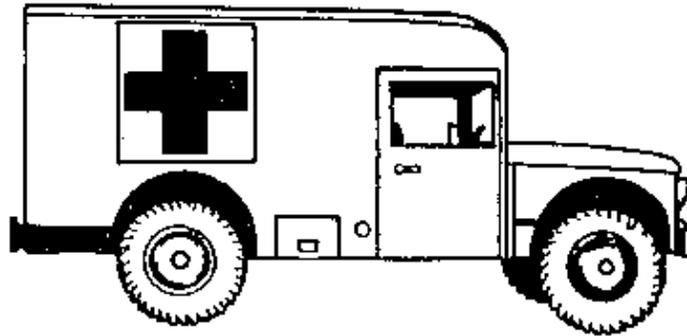
Litter Team Leader steps to the rear and the left front bearer steps in front of the lead bearer to act as a guide.

LOW CROUCH: Used when moving through tunnels or trenches where the bearers must keep their heads down. On command, "Low crouch, move," all bearers bend at the knees and waist, keeping their heads down.

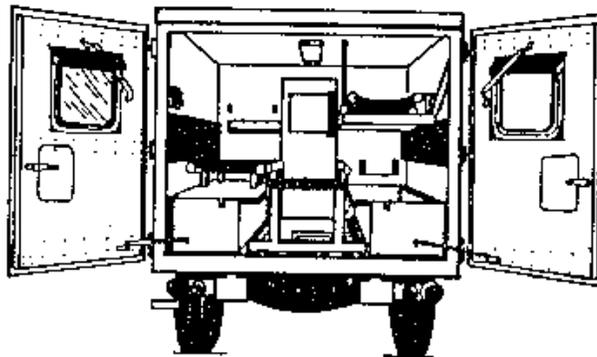
Figure 19. Low Crouch.



SCHEMATICS OF VEHICLE TRANSPORTATION

Figure 20. Field Ambulance (Vehicle Exterior).**Loading Sequence:**

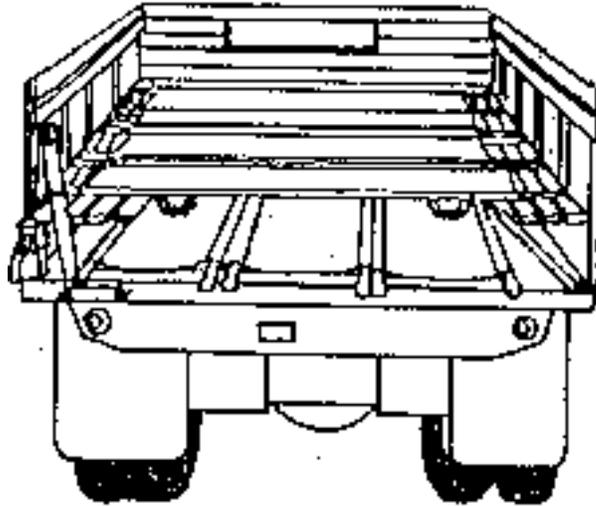
1. Load the top right berth with the least injured casualty.
2. Load the lower right berth with a casualty requiring more immediate care.
3. Load the top left berth with a casualty whose priority of treatment is higher than the casualty on the lower right berth.
4. Finally, load the casualty requiring the most immediate care onto the lower left berth.

Figure 21. Field Ambulance (Vehicle Interior).**Unloading Sequence:**

Casualties are unloaded beginning with the lower left berth, reversing the loading sequence. This allows the casualty requiring the most immediate care to be unloaded first and the one requiring the least immediate care to be unloaded last.

2 ½ TON CARGO TRUCK. Normally used to transport general cargo and personnel. It has a canvas-covered cab and tarpaulin braces and sideboards. It has a maximum capacity of twelve litter casualties. It is loaded in two layers from front to rear, beginning with the front-upper layer. Loading must be done carefully so as not to obstruct the placing of one litter by the premature loading of another. Most seriously injured casualty is loaded last.

Figure 22. 2 ½ Ton Cargo Truck.



Loading Sequence:

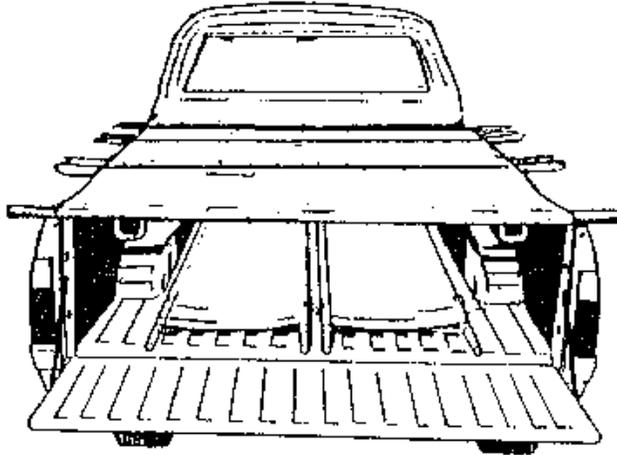
1. Lower the seats. Remove canvas, it is in place.
2. Move to driver's side of truck. Load litters feet first on driver's side.
3. Place three litters crosswise on the seats at the front of the truck.
4. Place three litters lengthwise on the floor of the truck. Loading sequence is right side, left side, then center. Load casualty's head first.
5. Place three additional litters crosswise on the seats. Secure last litter in place on the seat with rope, safety strap, or anything available.
6. Extend tailgate and secure. Load last three litters, using same sequence as in Step 4.
7. Secure the last three litters with rope, safety strap, or anything that is available.

UNLOADING SEQUENCE.

Casualties are unloaded by reversing loading procedures, taking the most seriously injured off first.

PICKUP TRUCK. This vehicle is a lightweight, open top, cab type truck used to transport personnel or light general cargo. This is a common vehicle for most units and can be adapted for casualty carrier with a five litter capacity.

Figure 23. Pickup Truck.



Loading Sequence:

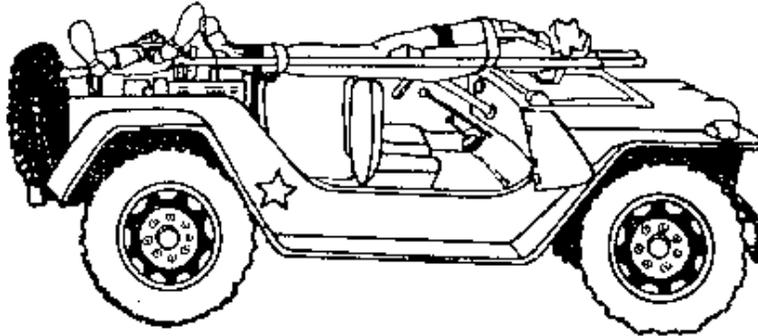
1. Place three litters side by side across the truck bed side rails.
2. Secure the third litter with materials available (rope, safety strap, etc.).
3. Place two litters lengthwise head first on bottom of the truck. Load from right to left.
4. Secure bottom litters by raising and securing the tailgate.
5. Load least seriously injured first, most seriously injured last.

Unloading Sequence:

1. Reverse loading procedures.
2. Most seriously injured (bottom left) will be taken off first.

1/4 TON UTILITY TRUCK, "JEEP". A general purpose personnel or cargo carrier designed for close-in support in forward areas. Commonly called a "jeep." Generally available and can be easily converted to a casualty carrier. The vehicle can be open or have a cab-type cover. If the jeep has cover, it must be removed to place litters on the vehicle. The jeep has the capacity to hold two litter patients. If altered with a field ambulance kit, it has the capacity to hold three or four litter patients. If altered with a field ambulance kit, it has the capacity to hold three or four litter patients.

Figure 24. 1/4 Ton Utility Truck, "Jeep."



SECTION E

SABC STUDENT DIRECTION AND CHECKLISTS

Directions for Student Performance

1. Choose partner from class.
2. Decide who is "victim" and who is "buddy care-giver".
3. "Buddy care-giver" performs tasks on SABC Checklist (AF Form 2519).
4. Notify instructor when task finished; he/she evaluates task as "satisfactory" or "unsatisfactory".
5. Change roles with partner (one "buddy care-giver," one "victim").
6. "Buddy care-giver" performs tasks on "victim".
7. Notify instructor when task is finished; he/she evaluates task as "satisfactory" or "unsatisfactory".
8. Perform all tasks on SABC Checklist (AF Form 2519), using these directions.

SELF-AID AND BUDDY CARE STUDENT CHECKLIST

YES NO NA

NAME: _____ RANK: _____

Objectives: Given various scenarios, demonstrate proper SABC techniques IAW all items on this checklist

Criteria: At the completion of this checklist the member will be able to perform all skills listed on this checklist

1. AIRWAY MANAGEMENT

Using a fellow student or CPR manikin as a victim perform procedure to open victim's airway IAW SABC checklist.

- a. Open victim's airway using the head tilt-chin lift maneuver.
- b. Verbalize the cause(s) for airway obstruction.

2. BLEEDING

Using simulated materials and a fellow student as a victim control simulated bleeding IAW SABC checklist.

- a. Use direct pressure.
Upper arm
- b. Position victim's body.
- c. Use tourniquet (apply loosely and do not tighten for evaluation!)
Upper arm

3. SHOCK

Using a fellow student as a victim perform procedures to control shock IAW SABC checklist

- a. Position victim's body.
- b. Prevent loss of body heat.

4. DRESSING/BANDAGES

Given materials with which to improvise dressings and bandages apply them to simulated wounds on a fellow student IAW SABC checklist.

- a. Apply dressing and bandage to wound of head.
- b. Apply dressing and bandage to wound of chest.
- c. Apply dressing and bandage to wound of upper leg.
- d. Apply dressing and bandage to wound of abdomen.

YES NO NA

5. **FRACTURES/SPLINTS**

Given materials with which to improvise splints, apply them to simulated fractures on a fellow student IAW SABC checklist.

- a. Apply splint to fracture of upper arm.
- b. Apply splint to fracture of lower arm.
- c. Apply splint to fracture of upper leg.

6. **VICTIM TRANSPORTATION**

Transport the sick, injured or deceased victim

- a. Given suitable materials, improvise a litter IAW SABC checklist
- b. Using an improvised litter and a fellow student as a victim, transport him/her IAW SABC checklist
 - (1) Transport victim 10 feet, using fireman's carry.
 - (2) Transport victim 10 feet, using fore-and-aft carry.
 - (3) Transport victim 10 feet, using two hand seat carry.
 - (4) Transport victim 10 feet, using four hand seat carry.
 - (5) Transport victim 10 feet, using improvised litter.

I certify that _____ has/has not successfully completed the prescribed techniques above

Date Signature - Trainee

Date Signature - Trainer

Comments:

SABC EQUIPMENT/SUPPLIES

ITEM NAME:	NSN:
Autoinjector Demo Set	6910-01-061-6444
Bandage, Elastic (Ace Wrap)	6510-00-935-5821
Bandage, Gauze	6510-00-582-7992
Bandage, Muslin (Cravat, Sling)	6510-00-201-1755
Field Dressing (4X7)	6510-00-159-4883
Field Dressing (7X8)	6510-00-201-7430
Field Dressing (11X11)	6510-00-201-7425
Disposable Gloves	6545-01-094-8412
First Aid Kit, Individual	6545-00-912-9860
Gauze, Unsterile (4X4)	6510-00-782-2698
Gloves	6510-00-462-0832
Litter Straps, Webbing	6530-00-784-4205
Litter, Field, Green	6530-00-783-7905
Pocket Mask (CPR)	6515-01-181-3163
Pryidostigmine Bromide Demo Set	6505-01-178-7903
Surgical Tape, 1 inch	6510-00-926-8882
Splint, Ladder	6510-00-373-2100
Splint, Wood	6510-00-372-1200

These are some of the items you can use with your SABC program. Remember that in wartime they may not be readily available, so it's recommended you also utilize improvised materials whenever appropriate.

BIBLIOGRAPHY

1. Grant, Harvey and Robert Murray. *BRADY Emergency Care*. Current Edition Simon Schuster Company, 1990.
2. Klinghoffer, Max. *TRIAGE EMERGENCY CARE HANDBOOK*, Technomic Publishing Company, 1985.
3. U.S. Department of Labor Mine Safety and Health Administration. *FIRST AID BOOK*. Washington, D.C., 1990.

INSTRUCTOR COURSE EVALUATION

Date: _____ Instructor: _____

Squadron: _____ Base: _____ DSN Number: _____

1. Do the instructor manual and film meet the training objectives of this course? (1) Yes _____ (2) No _____
If NO, please explain.

2. Of the six areas presented in the instructor manual, are there any areas that need to be improved? Please circle all applicable areas and list what improvements are necessary (i.e. needs more clarification or explanation; too difficult to follow, etc.).

(1) Airway Management

(2) Bleeding

(3) Shock

(4) Dressing/Bandages

(5) Fractures/Splints

(6) Victim Transportation

(7) No areas identified at this time

3. Of the six areas presented in the instructor manual, are there areas that consistently require remedial training? Please circle all applicable areas and list the additional time required (in minutes).

(1) Airway Management

(2) Bleeding

(3) Shock

(4) Dressing/Bandages

(5) Fractures/Splints

(6) Victim Transportation

(7) No areas identified at this time

4. Based upon the student course evaluations, which of the six areas do students identify as wanting to spend more time on?

Please circle all applicable areas.

- (1) Airway Management
- (2) Bleeding
- (3) Shock
- (4) Dressing/Bandages
- (5) Fractures/Splints
- (6) Victim Transportation
- (7) No areas identified at this time

5. Based upon the student course evaluations, which of the six areas do students identify as wanting to spend less time on?

Please circle all applicable areas.

- (1) Airway Management
- (2) Bleeding
- (3) Shock
- (4) Dressing/Bandages
- (5) Fractures/Splints
- (6) Victim Transportation
- (7) No areas identified at this time

6. Any additional comments for improving this course?

EDGAR R. ANDERSON, JR., Lt General, USAF, MC
Surgeon General